Vol. I JANUARY, 1924 No. 4

PEABODY JOURNAL OF EDUCATION

CONTENTS

General Intelligence and Mechanical Ability 181
C. H. Lander

Age-Grade-Sex Percentile Norms for Some Educational Tests 191
S. C. Garrison and Florence Ryan

Æsthetics and Civilization 201
Herbert C. Sanborn

A Study of School Marks 207
L. A. Sharp

An Experiment in Freshman Home Reading 215
Bonnie Gilbert

Good Citizenship 221
Robert Alexander Cummins

A Study of the Relative Elementary and High-School Cost Per Pupil in Thirty Tennessee Schools 229
Joe Jennings

Editorials 233
The Higher Outlook
Concerning Ourselves—and You

Book Reviews and Notices 235

Published bimonthly by the Faculty of
GEORGE PEABODY COLLEGE FOR TEACHERS
NASHVILLE TENNESSEE
Two dollars a year Single copies 40 cents

PEABODY JOURNAL OF EDUCATION

Copyright, 1924, by the Faculty,
George Peabody College for Teachers.

Edited and Published by

THE FACULTY OF GEORGE PEABODY COLLEGE FOR TEACHERS

NASHVILLE, TENNESSEE

EDITORIAL COMMITTEE

CHARLES S. PENDLETON, *Chairman*

CHARLES E. LITTLE — JOSEPH PETERSON
CHARLES A. McMURRY — SHELTON PHELPS
ALMON E. PARKINS — ALFRED I. ROEHM
HANOR A. WEBB, *Business Manager*

The PEABODY JOURNAL OF EDUCATION is published bimonthly—July 1, September 1, November 1, January 1, March 1, and May 1—at George Peabody College for Teachers, Nashville, Tennessee. The subscription price is $2.00 per year; single copies, 40 cents; less than a half year at the single-copy rate. Single copies can be supplied only when the stock on hand warrants. Foreign postage, 20 cents a year extra.

Entered at the post office at Nashville, Tennessee, as second-class mail matter. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized September 14, 1923.

The Ward-Belmont School

FOR GIRLS AND YOUNG WOMEN

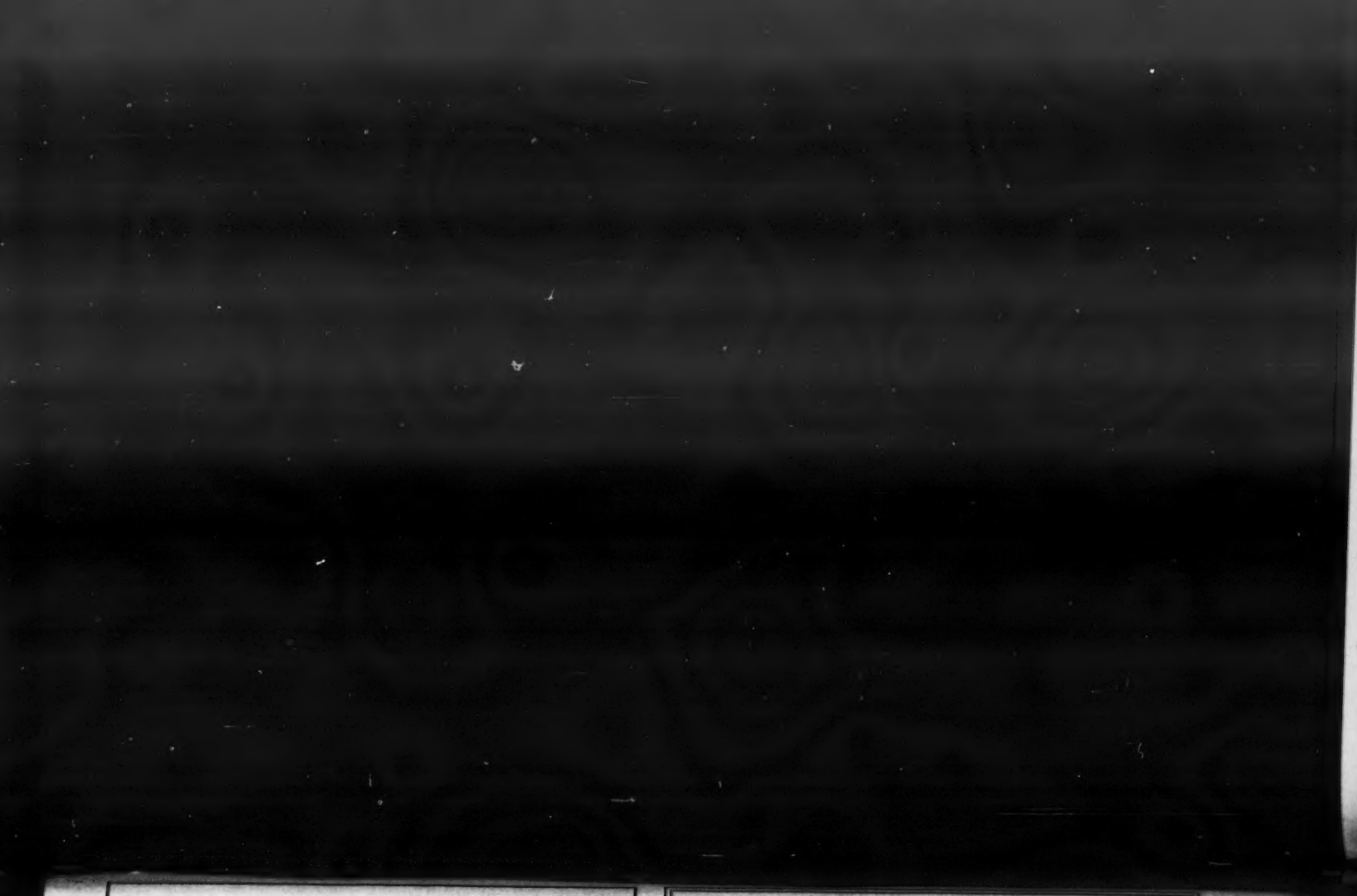
Aims to inculcate the noblest ideals of efficient, wholesome, cultured womanhood.

Ward-Belmont offers a six-year course of study embracing two years of college. It meets the demands of a discriminating patronage in Literary Work, Music, Art, Expression, Home Economics, Business and Physical Training. The curriculum is shaped to meet individual capacities and aims. The faculty is select. The beautiful campus and buildings and the country club three miles distant afford ample opportunity for the development of mind and body.

FOR CIRCULARS, ADDRESS

J. D. BLANTON, PRESIDENT

Ward-Belmont School — Nashville, Tennessee



NEW HIGH SCHOOL TEXTS

A FIRST BOOK IN CHEMISTRY
ROBERT H. BRADBURY
$1.80

CHEMISTRY IN EVERYDAY LIFE
CHARLES G. COOK
$1.80

COURSE IN JOURNALISTIC WRITING
GRANT MILNOR HYDE
$1.60

ELEMENTS OF RETAILING
RUTH LEIGH
$1.80

VERSE OF OUR DAY
M. GORDON and M. B. KING
$1.60

A FIRST COURSE IN FRENCH
C. A. DOWNER and
W. E. KNICKERBOCKER
$1.75

A FIRST BOOK IN ALGEBRA
HOWARD B. BAKER
$1.32

D. Appleton and Company
35 West 32nd St. New York

BOOKS

of all
Publishers
for the
School
Home and
Church

LAMAR & BARTON
Nashville Dallas Richmond San Francisco
Catalogue on Request

AMERICAN EDUCATION SERIES

GEORGE DRAYTON STRAYER, *General Editor*

The highest type of technical and practical books for teachers, prospective teachers, and school executives. Books thus far issued in the series:

LARUE'S PSYCHOLOGY FOR TEACHERS
PITTMAN'S SUCCESSFUL TEACHING IN RURAL SCHOOLS
RUSSELL'S THE TREND IN AMERICAN EDUCATION
STARK'S EVERY TEACHER'S PROBLEMS
STRAYER & ENGELHARDT'S THE CLASSROOM TEACHER

Full description of these books will be sent to any teacher on request.

AMERICAN BOOK COMPANY
NEW YORK CINCINNATI CHICAGO

DEALING WITH AN UNSOLVED PROBLEM IN MODERN EDUCATION

THE RURAL EDUCATION SERIES

Under the general editorship of

MISS MABEL CARNEY

Teachers College, Columbia University

Here is a series, new in material, that presents and indorses the comprehensive modern philosophy of socialized and broadened education for country children. Its purpose, which differentiates it from that of other rural series, is threefold: (1) to evaluate the attempt to induce the rural child to stay in the country; (2) to focus attention upon the needs of rural schools and assist in the remedying and alleviation of their conditions; and (3) to aid teachers and supervisors in the concrete application and practice of democratic principles in connection with rural education.

BARNES: RURAL SCHOOL MANAGEMENT

A modern, scientific, and sound treatment of rural school needs

Price, $1.60

BRIM: RURAL EDUCATION

A critical study of the objectives and needs of the rural elementary school

Price, $1.40

The Macmillan Company

NEW YORK BOSTON CHICAGO ATLANTA DALLAS SAN FRANCISCO

Psychology
Measurement
Intelligence

PEABODY JOURNAL
OF EDUCATION

VOLUME I JANUARY 1924 NUMBER 4

GENERAL INTELLIGENCE AND MECHANICAL ABILITY

C. H. LANDER
George Peabody College for Teachers

During the past five years there has been a great deal of study and discussion of general intelligence and of its significance in education. Judging from the time, interest, and enthusiasm given to it on the part of many investigators and educators, one might easily conclude that at last the *summum bonum* of education had been found. It has played an important part in the grading and sectioning of classes, in promotion, in entrance to college, and in educational and vocational guidance. No doubt much good has been accomplished and our educational scheme made more effective through its better adjustment to the varying mental abilities of pupils. Many seem to feel that through adjusting the course of study to general intelligence, individual differences might be adequately provided for. But is it right to assume that this so-called *general intelligence*, measured by psychological tests and usually stated in the form of intelligence quotients, is the only thing to be considered in the adjustment of a scheme of education to individuals who vary not only in general intelligence, but in a number of other important abilities and characteristics? There are, doubtless, many forms of ability which are important factors in the formation of character and in the achievement of success in after life and are therefore to be considered in education. One of the most important of these is probably the one that has been designated as mechanical ability, the ability to manipulate concrete materials—to do things. As Stenquist's circular on "Tests of General Mechanical Ability" says: "There is no evidence to show that all who drop

out of school as failures are really of low intelligence. In fact, the term 'general' intelligence is greatly in need of definition. The average person accepts the term at face value to mean just what it says, and often the results of a single test as the measure of it. But it seems a loose use of terms that leads us to call only those individuals intelligent who score high in intelligence tests which are entirely or largely academic." "The Stenquist assembling tests deal with a type of ability believed to be of quite as great importance as the more abstract ones."[1]

Who is there that will deny the importance of mechanical ability, the fundamental part it plays in the welfare and progress of society, and, therefore, the corresponding place it should occupy in our scheme of education—our plan of preparation for membership in society? The fundamental importance of this ability was recognized and admirably stated centuries ago by the author of Ecclesiasticus, one of the apocryphal books of the Bible. Referring to the agricultural workers, the carpenter, the graver, the smith, and the potter, he declares: "All these put their trust in their hands; and each becometh wise in his own work. Without these shall not a city be inhabited, and men shall not sojourn nor walk up and down therein. . . . But they will maintain the fabric of the world; and in the handiwork of their craft is their prayer."

"Modern life is permeated on every hand with machines and mechanical devices of every description. As has so often been said, we are living in what is distinctly a machine age; and the ability to handle machines, to think in terms of the product of mechanical genius, is daily becoming more important to every one. Marked ability of this type should, therefore, be discovered as early in life as possible and appropriate training provided. From the mechanically gifted children of to-day will come our great inventions and scientific discoveries of to-morrow. Much of this type of ability is to-day wasted because no adequate means has been at hand for discovering its presence. While the past few decades have forced recognition of the importance of the general field of manual and industrial education below college grade, such work is quite as much in need of means of exact measurement as were the academic subjects up until the recent introduction of achievement tests and tests of general abstract intelligence."[2]

The prevailing opinion seems to be that there is a high correlation in abilities and capacities, that a person possessing one ability in high

[1] Circular issued by the C. H. Stoelting Co., Chicago, Ill.
[2] Stenquist, John L.: Circular on "Tests of General Mechanical Ability." Issued by the C. H. Stoelting Co., Chicago, Ill.

degree is quite likely to possess other abilities in high degree also, that a person who does well in one line of work is likely also to do well in other lines. Mrs. Woolley, from her study of 149 children, tested with regard to both their motor and mental abilities, found that "those who were best in mental tests were also, on the whole, best in the physical tests and in physical development. In so far as that evidence goes, it would seem to show that there is not only no opposition between manual and mental ability, but that the two are much more likely to be correlated than opposed."[3]

According to Brewer, Thorndike also concludes "that desirable qualities stand in positive correlation to each other, that it is not proved that there are 'mental antagonisms,' a person being good in manual skill, but poor at abstract thinking."[4] "Divergence toward what we call 'better adaptations to the world' in any respect seems to be positively related to better adaptations in all, or nearly all, respects."[5]

On the other hand, there can be pointed out innumerable examples of illustrious school failures—men eminently successful in various walks of life, men of national and international reputation.[6] Most teachers of many years' experience can recall a large number of instances in which individuals who were very poor in academic school work, perhaps regarded as absolute failures educationally, have achieved marked success in the fields of work which they have entered.

Moreover, certain recent studies and experiences indicate that there is no high correlation between general intelligence and mechanical ability. Stenquist states that studies made by himself and others prove the low correlation between abstract general intelligence and mechanical ability as measured by his tests. His results show "that at least twenty per cent of the pupils from a typical school who are below average in general abstract intelligence are above average in the kind of ability required in four mechanical tests."[7]

"The correlation ranges from $r = 0.2$ to $r = 0.4$. This means that a pupil rated dull by the former (tests for general abstract intelligence) may easily happen to rank very high in mechanical ability. . . . Abstract intelligence tests predict fairly well success in academic subjects of school. But of the large percentage of pupils who

---

[3] Woolley, Helen T.: "The Present Trend of Vocational Guidance in the United States." *U. S. Bureau of Education, Bull.*, 1914, No. 14, 46.

[4] Brewer, John M.: *The Vocational Guidance Movement*, p. 148.

[5] Thorndike, E. L.: *Educational Psychology*, 3, 362.

[6] For citation of examples, see Stenquist, John L.: "The Case of the Low I.Q." *Journal Ed. Research*, 4: 241.

[7] Stenquist, John L.: "The Case of the Low I.Q." *Journal Ed. Research*, 4: 241-254.

now drop out of school because it is unsuited to their needs, a large proportion could unquestionably be greatly benefited if their other abilities were discovered by suitable tests, and suitable educational guidance provided."[8]

The Institute of Educational Research, Teachers' College, Columbia University, finds the Stenquist Mechanical Assembly test quite satisfactory for the determination of mechanical ability in boys.[9] Their results substantiate those found by Stenquist. "The correlation between general mechanical ability and general intelligence in equal-age groups is only about + .20. This means that a large proportion of pupils who fail in the elementary school may yet be able to make fair or good success in trade work."

For girls a mechanical assembly test has been devised which promises to be as satisfactory for them as is the Stenquist for boys. In equal-age groups of girls the test correlates only .30 with general intelligence.

Bird and Pechstein give an account of an experiment in which a group of twenty-five boys whose general intelligence had been determined were also ranked according to their success or accomplishment in an elementary course in machine-shop practice involving the fundamental operations on the engine lathe. There was found to be very little correlation between the intelligence scores and the scores on shop work, the coefficient being only + .14.[10] The lack of correlation is very well shown graphically in Figure 1.

These facts suggest that, while individuals show possibly as wide a range in mechanical ability as that recognized as existing in mental ability, the correlation between the two is very low, many ranking high in one ability and low in the other.

Education has been in the past, and still is to-day, largely dominated by academic standards and ideals, with emphasis on memory and abstract thinking. As stated by Thorndike: "The school is the paradise for the abstract thinker, for the boy or girl who is able to think with fives and sixes, x's and y's, parallels and perpendiculars, H_2O's and NaCl's, latitude and longitude, conditions contrary to fact, and clauses of purpose. The teacher is usually one who has himself been successful at this sort of thinking, and so is more in sympathy with it. He may even thoughtlessly sneer at the mental ability of

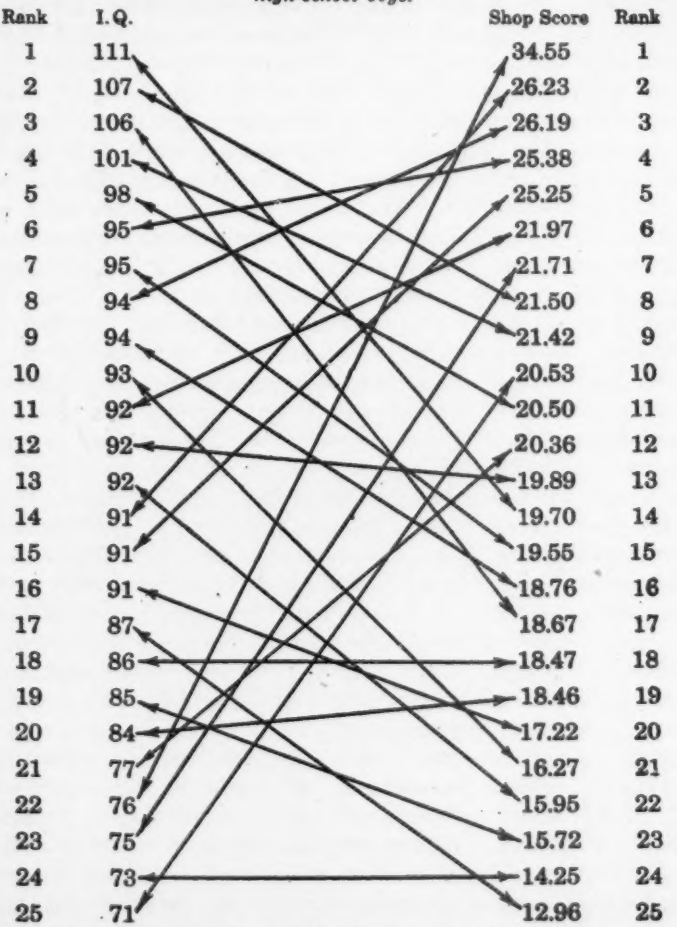
---

[8]Stenquist, John L.: Circular on "Test of General Mechanical Ability," p. 3. Issued by the C. H. Stoelting Co., Chicago, Ill.

[9]Toops, Herbert A.: "The Technique of Vocational Guidance as Investigated by the Institute of Educational Research." *Nat. Voc. Guidance Assoc. Bull.*, January, 1923, 86-93.

[10]Bird, Verne A., and Pechstein, L. A.: "General Intelligence, Machine Shop Work, and Educational Guidance in the Junior High School." *School Review*, 29: 782-786.

FIGURE 1—*Correspondence between I.Q. and shop score of twenty-five junior high-school boys.*



(From Bird and Pechstein, "General Intelligence, Machine Shop Work, and Educational Guidance in the Junior High School." *School Review*, 29: 785.)

those who lack it. 'Your son will make a first-rate mechanic or grocer, but he isn't fit for high school,' said such a one. The proper retort would have been: 'Your school, then, is first-rate for one kind of a boy, but isn't fit for the majority.' " . . . "But the school is often an uncomfortable, and perhaps an unprofitable, place for the concrete thinker."[11]

[11]Thorndike, E. L.: *Principles of Teaching*, 31.

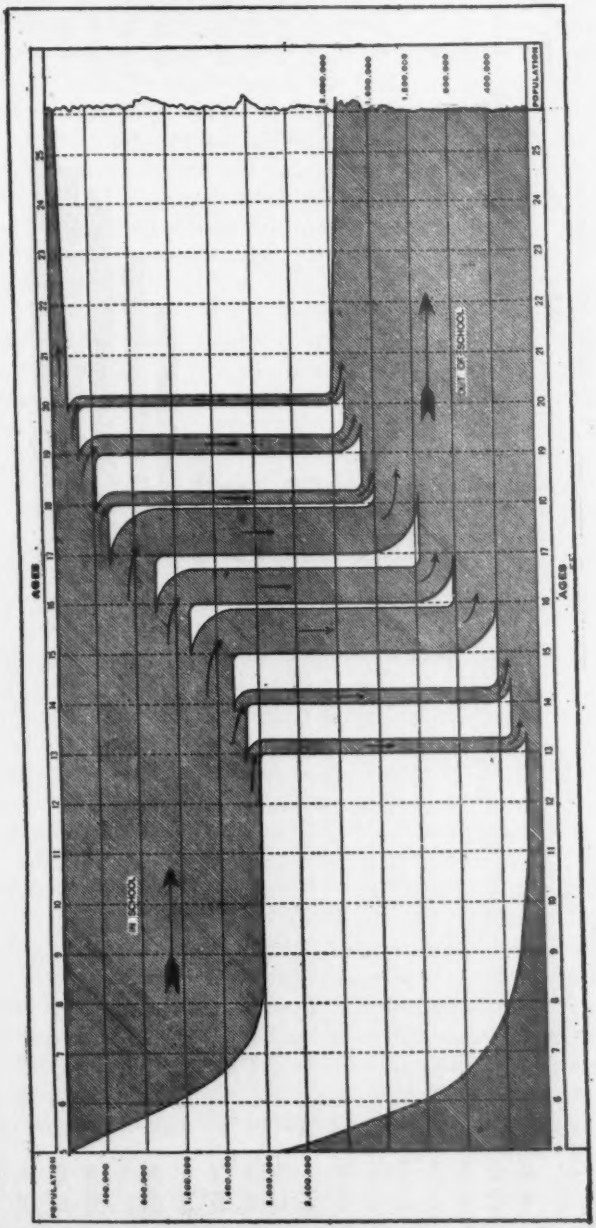
How little claim has such a scheme of education to be the ideal for a democracy, providing as it does for only one, or chiefly for only one, of the important types of ability! There can be no question that education of this kind, overemphasizing the importance of abstract thinking and neglecting the practical and concrete, the doing of things, is largely responsible for the prevailing notion that mental work is a very much higher type of work than manual work, thus placing a stigma upon the latter, the potency and far-reaching effects of which are realized by but few. This undemocratic idea goes back to the Greeks and their dualistic philosophy of an aristocracy or leisure class, doing no useful manual work of any kind, existing on and supported by a laboring or slave class which performed all the manual work necessary for the entire group and had as its reward the privilege of living—of a bare miserable existence. How unthinkable such philosophy, how inconsistent such an ideal of education in a democracy!

We were shocked and appalled when we were told that about seventy-five per cent of our population are not mentally capable of pursuing with profit the usual high-school course,[12] and yet is it so surprising when we realize that this course is based almost entirely on only one of the important varying abilities of individuals? It means merely that less than one-third of all have this ability in sufficient degree to meet the requirements of a course based upon it. And is it to be wondered at that forty-three per cent of the children of school age are not in attendance at our regular schools, when our schools have little or nothing to offer those who do not rank high in this one ability, nothing to interest them or appeal to them as worth while? As teachers, we are too prone to feel no responsibility and very little sympathy for the children who seem unable to adjust themselves to, and interest themselves in, our academic courses and standards. We think only of those who remain in school; we forget and ignore the other half. We are not often enough confronted with statistics showing the actual number of each age in school and out of school and the number dropping out year by year till only a very small proportion of those beginning the course remain to complete it. (See Figures 2 and 3.) According to recent estimates, a quarter million boys and girls drop out of our schools each year before completing the sixth grade and over two million leave annually between the beginning of the fourth grade and graduation from high school—that is, before completing the course of study which is being insisted upon by many as the ideal for all normal citizens in a democracy such as ours.

---

[12] MacDougall, William: *Is America Safe for Democracy?* p. 162.

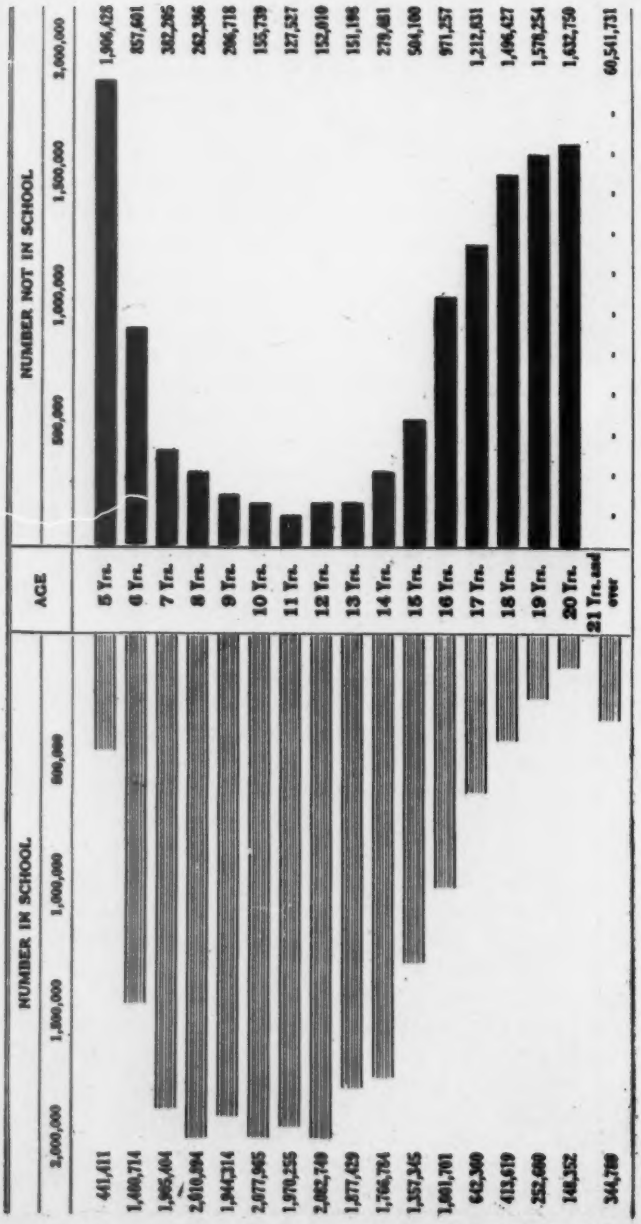
FIGURE 2—*Boys and girls in school and not in school, 1920.*



(Number attending school and population data supplied by Bureau of Census.)

(From the Sixth Annual Report, Federal Board of Vocational Education.)

FIGURE 3—*From school to work.*



(From the Sixth Annual Report, Federal Board for Vocational Education.)

It is only quite recently that some are beginning to realize the importance of work—i. e., profitable employment—in education. Mrs. Reed, in her *Junior Wage Earner*, says: "We live in the end of an age in which juvenile employment has been an industrial asset and an educational liability; we live in the beginning of an age in which juvenile employment is fast becoming an educational asset and an industrial liability. In the old age, educators assumed that juvenile employment was a legislative problem; in the new age, they are coming to see that it is an educational problem—that it means the recognition of juvenile employment as a legitimate and constructive factor in education."[13]

Lewis H. Carris, late of the Federal Board for Vocational Education, states that "one cannot easily dismiss any consideration of compulsory attendance laws and minimum age requirements in such laws without giving some consideration to the question so often raised as to whether our public schools as developed are, after all, so constituted as to give really useful education to all children; or, rather, to state the question somewhat differently, whether actual employment, with the responsibilities, practical discipline, and educational opportunities that are frequently associated with actual employment, does not present for a certain number of our youth, it may be for only a minority of them, educational advantages on the whole superior to those offered at present by public schools."[14]

The logical and unbiased consideration and study of the facts here presented suggest a number of things that must be done if we are to justify the claim that our system of education is democratic, providing equal (not identical) opportunity to all for the free and full development of their powers.

1. If our education is to be democratic, we must develop and organize a large number of subjects or activities aimed to develop mechanical ability and introduce them into all our schools—subjects that will meet the needs and interests of those in whom mechanical ability is greater than their ability in abstract thinking. This does not mean that in the case of any individual the weaker ability is to be neglected, but that opportunity must be provided for the development of the stronger. Society needs individuals with the highest possible development of each kind of ability, but there should be maintained in each individual a certain amount of balance between the two, in order that he may be an efficient member of society and because it is essential to his own greatest usefulness and happiness.

---

[13] Reed, Anna Y.: *Junior Wage Earners*, 122-123.

[14] *Compulsory Part-Time School Attendance Laws.* Bulletin 55, Federal Board for Vocational Education, 15.

2. The academic-minded, which means most of us teachers, must be much more careful that neither by attitude nor expression do they minimize the importance and respectability of honest manual or physical work and workers and that they do not unduly exalt or emphasize mental work.

As before suggested, the extent of the harm done to countless individuals in this way, and the injury to society cannot be estimated. Much has been said in recent years about the effect of the automatic machine—the so-called "iron man" of industry—and, without doubt, it is a serious factor to be reckoned with; but, to my way of thinking, a far greater menace is to be found in the deprecating attitude of many persons toward the honest manual work of the world. No effort should be spared to remove the stigma attached to the doing of such labor.

3. The importance of work experience in education must be more generally recognized, and its utilization made possible in every school system by part-time education, either on the coöperative plan, in which the pupils spend approximately half the time in school and devote half the time to useful employment, or by the more usual part-time school, in which young workers spend from four to ten hours per week. At least twenty-five states have enacted compulsory part-time school attendance laws, requiring all young workers of certain ages to attend such schools. How many of us teachers have any very definite idea of what these schools are like and what they are accomplishing? How many are aware that during the past year 199,017 working children were enrolled in part-time schools? How many of us realize the tremendous possibilities of this type of school or recognize it as an essential part of the same educational system with which we are concerned?[15]

---

[15] See *Sixth Annual Report of the Federal Board for Vocational Education*, 1922, and *Part-Time Schools, A Survey of Experience in the United States and Foreign Countries, with Recommendations*. Bulletin 73, Federal Board for Vocational Education.

Psychology
Measurement

AGE-GRADE-SEX PERCENTILE NORMS FOR SOME EDUCATIONAL TESTS

S. C. GARRISON and FLORENCE RYAN
George Peabody College for Teachers

In the September, 1923, number of this JOURNAL the writers presented age-grade-sex percentile norms for the Woody-McCall test on mixed fundamentals in arithmetic. Similar norms are here presented for the Nassau supplement to the Hillegas composition scale and for the Buckingham extension of the Ayres spelling scale.

II. *NASSAU COUNTY SUPPLEMENT TO THE HILLEGAS COMPOSITION SCALE*

TABLE IIIa

Age-Grade-Sex Percentile Norms for the Nassau County Supplement to the Hillegas Composition Scale—Fourth-Grade Boys

PERCENTILE	AGES 8	9	10	11	12	
High	6.6	6.8	6.6	6.9	6.8	
90	4.3	4.9	4.2	4.4	4.7	
80	3.5	3.8	3.9	3.9	3.6	
70	3.1	3.	3.2	3.	2.9	
60	2.7	2.9	2.6	2.5	2.3	
50	2.4	2.8	2.4	2.	1.8	1.6
40	2.1	2.7	2.1	1.6	1.6	
30	1.9	1.6	1.8	1.3	1.2	
20	1.1	1.5	1.3	1.	.8	
10	.5	1.4	.7	.5	.3	
Low	0	.2	.2	0	0	
Number of Pupils	163	345	187	121	106	45

TABLE IIIb

Fourth-Grade Girls

PERCENTILE	AGES 8	9	10	11	12	13
High	6.	6.7	6.2	6.4		
90	4.1	4.2	4.8	5.		
80	3.5	3.7	3.9	3.8		
70	3.2	3.3	3.5	3.2		
60	3.	3.1	3.2	2.7		
50	2.7	2.9	2.9	2.1	2.4	
40	2.4	2.5	2.8	2.4		
30	2.	2.	2.6	1.9		
20	1.5	1.7	1.5	1.3		
10	.6	1.2	1.	.7		
Low	.1	.3	0	.2		
Number of Pupils	167	358	162	104	46	

TABLE IIIc

Fifth-Grade Boys

PERCENTILE	AGES 9	10	11	12	13
High	8.1	8.3	7.7	8.2	7.
90	6.2	6.3	5.9	6.6	6.2
80	4.8	4.7	4.3	4.3	3.4
70	4.3	3.9	3.8	3.4	3.1
60	3.7	3.7	3.4	2.7	2.7
50	3.	3.	2.7	2.6	2.5
40	2.8	2.8	2.4	2.2	2.1
30	2.6	2.5	2.	2.	2.1
20	1.7	1.8	1.7	1.6	1.4
10	1.1	1.6	1.1	1.	.8
Low	.3	.5	.2	0	0
Number of Pupils	184	386	185	156	97

TABLE IIId

Fifth-Grade Girls

PERCENTILE	AGES 9	10	11	12	13
High	8.	8.	6.8	7.6	
90	6.	6.1	4.7	5.	
80	4.6	5.	4.3	4.2	
70	4.4	4.2	3.7	3.9	
60	3.6	3.7	3.4	3.3	
50	3.	3.4	3.	2.8	2.
40	2.7	3.	2.7	2.3	
30	2.5	2.7	2.4	2.	
20	1.9	2.	1.8	1.1	
10	.9	1.4	1.	.5	
Low	.6	.5	0	0	
Number of Pupils	200	421	218	119	11

TABLE IIIe

Sixth-Grade Boys

PERCENTILE	AGES					
	10	*11*	*12*	*13*	*14*	*15*
High	8.8	8.4	9.	9.		
90	7.2	7.	7.4	7.4		
80	5.1	5.6	5.5	5.7		
70	4.5	5.	4.7	4.9		
60	4.	4.3	4.1	4.1		
50	3.7	3.9	3.6	3.6	3.2	3.
40	3.4	3.1	3.	3.1		
30	2.8	2.6	2.	1.9		
20	2.4	2.1	1.4	1.2		
10	1.5	1.1	1.1	.8		
Low	1.	1.2	.8	0		
Number of Pupils	151	309	256	130	43	22

TABLE IIIf

Sixth-Grade Girls

PERCENTILE	AGES					
	10	*11*	*12*	*13*	*14*	*15*
High	7.9	8.6	9.	8.1		
90	7.	7.4	7.6	7.4		
80	5.1	5.6	6.	5.3		
70	4.6	5.1	5.2	4.6		
60	3.9	4.	4.	3.7		
50	3.7	3.8	3.6	3.4	3.3	3.3
40	3.5	3.5	3.1	2.6		
30	2.7	2.9	2.7	2.1		
20	2.1	2.5	2.	1.9		
10	1.1	1.5	1.4	1.		
Low	.4	.5	0	0		
Number of Pupils	174	349	218	114	35	12

TABLE IIIg

Seventh-Grade Boys

PERCENTILE	AGES 11	12	13	14	15	
High	9.	9.	9.	8.7		
90	6.9	7.2	7.7	6.9		
80	5.6	5.7	6.4	6.1		
70	4.9	5.	5.5	5.		
60	4.4	4.3	5.	3.2		
50	4.1	4.	3.8	3.	3.	3.3
40	3.9	3.5	3.2	3.		
30	3.4	2.8	2.7	2.4		
20	3.1	2.6	1.6	1.3		
10	2.4	2.4	.8	.9		
Low	1.3	1.	.5	0		
Number of Pupils	100	524	204	131	36	27

TABLE IIIh

Seventh-Grade Girls

PERCENTILE	AGES 11	12	13	14	15	16
High	9.	9.	8.2	8.4		
90	7.3	7.	7.8	7.1		
80	5.9	6.2	6.3	5.6		
70	5.8	5.8	5.5	5.2		
60	5.2	5.4	4.9	4.9		
50	4.1	4.1	3.7	3.7	3.5	
40	3.7	3.8	3.3	3.5		
30	3.3	3.5	3.	2.6		
20	2.7	2.9	2.6	1.7		
10	2.1	1.6	1.	1.		
Low	1.	1.2	.1	.2		
Number of Pupils	247	596	244	105	26	

TABLE IIIi

Eighth-Grade Boys

PERCENTILE	AGES 11	12	13	14	15
High	9.	9.	9.	9.	
90	7.7	7.3	8.1	7.9	
80	6.4	6.4	6.6	6.3	
70	5.5	5.7	5.7	5.2	
60	5.	5.2	5.	4.4	
50	4.7	4.7	4.4	3.7	4.1
40	4.3	4.3	4.1	3.2	
30	3.8	3.6	3.2	2.4	
20	3.3	3.1	2.3	1.8	
10	2.7	2.4	1.9	1.1	
Low	2.1	2.	.8	0	
Number of Pupils	41	122	288	120	82

TABLE IIIj

Eighth-Grade Girls

PERCENTILE	AGES 11	12	13	14	15
High	9.	9.	9.		
90	7.3	8.2	8.		
80	6.2	7.3	6.4		
70	5.5	6.3	5.4		
60	5.1	5.8	4.8		
50	4.7	5.	4.4	4.	3.7
40	4.2	4.6	4.1		
30	3.4	3.9	3.5		
20	2.9	3.1	3.		
10	2.2	1.9	2.1		
Low	1.2	.9	1.		
Number of Pupils	59	162	367	97	70

III. *BUCKINGHAM EXTENSION OF THE AYRES SPELLING SCALE**

TABLE IVa

Age-Grade-Sex Percentile Norms for the Buckingham Extension of the Ayres Spelling Scale—Fourth-Grade Boys

PERCENTILE	AGES 8	9	10	11	12	13
High	20.	20.	20.	19.1	20.	
90	18.6	17.8	17.	17.7	16.6	
80	16.9	16.8	14.2	14.8	15.2	
70	16.2	15.6	12.7	13.2	12.	
60	14.9	14.7	12.2	11.6	9.2	
50	14.1	13.7	11.6	11.	8.1	8.5
40	13.4	12.3	11.	10.1	7.	
30	11.7	10.7	10.1	9.1	5.5	
20	9.5	9.2	8.9	8.1	4.5	
10	7.1	6.8	7.4	7.	3.5	
Low	2.	2.	2.	1.	0	
Number of Pupils	188	348	189	121	129	40

TABLE IVb

Fourth-Grade Girls

PERCENTILE	AGES 8	9	10	11	12	13
High	20.	20.	20.	20.		
90	18.4	18.8	18.	17.3		
80	17.2	17.5	14.7	13.3		
70	16.5	16.3	13.2	11.8		
60	14.8	15.	11.6	11.		
50	14.1	14.	10.6	10.1	10.1	9.1
40	13.	12.5	9.	8.5		
30	11.2	10.8	7.7	7.5		
20	8.8	8.7	6.8	6.4		
10	7.	7.3	5.6	5.		
Low	3.	3.	3.	2.		
Number of Pupils	168	348	169	102	71	21

*These norms are expressed in number of words spelled correctly. Twenty words were given from the column of which the grade in question was supposed to spell 73%.

TABLE IVc

Fifth-Grade Boys

PERCENTILE	AGES 8	9	10	11	12	13	14
High		20.	20.	20.	20.		
90		18.3	19.5	17.6	14.3		
80		15.8	16.7	15.	12.1		
70		13.9	15.	12.4	10.5		
60		12.4	13.6	10.8	9.3		
50	10.7	11.1	12.7	10.	8.7	8.5	8.2
40		9.4	11.7	8.1	7.4		
30		8.2	10.4	6.1	6.		
20		6.8	8.6	4.6	4.		
10		5.7	5.8	2.7	1.6		
Low		3.	3.	2.	2.		
Number of Pupils	28	347	290	184	140	98	25

TABLE IVd

Fifth-Grade Girls

PERCENTILE	AGES 8	9	10	11	12	13
High		20.	20.	20.	20.	
90		19.1	18.5	18.4	16.8	
80		16.9	16.8	17.	15.	
70		14.3	13.9	15.5	12.5	
60		12.7	12.5	14.	9.8	
50	12.	12.3	11.4	12.5	8.8	11.8
40		11.4	10.5	11.4	8.1	
30		10.1	9.4	9.	7.3	
20		8.2	7.7	7.6	5.3	
10		6.2	4.7	5.6	3.8	
Low		4.	2.	3.	3.	
Number of Pupils	16	357	275	183	115	74

TABLE IVe

Sixth-Grade Boys

PERCENTILE	AGES 9	10	11	12	13	14	15
High		20.	20.	20.	20.		
90	18.4	18.8	18.2	17.5			
80	16.9	17.2	17.3	16.4			
70	13.8	13.7	14.8	13.2			
60	13.1	11.9	13.3	11.7			
50	12.	11.6	12.3	11.4	10.5	11.2	10.2
40	10.7	11.2	10.8	10.2			
30	9.6	9.8	9.6	9.2			
20	7.8	6.9	7.3	6.8			
10	5.1	4.8	4.4	4.1			
Low	3.	3.	2.	2.			
Number of Pupils	162	179	242	109	45	19	9

TABLE IVf

Sixth-Grade Girls

PERCENTILE	AGES 10	11	12	13	14	15	16
High		20.	20.	20.	20.		
90		19.	19.8	18.9	19.1		
80		17.9	19.5	17.5	18.2		
70		16.7	17.8	15.7	14.8		
60		14.8	16.4	14.4	13.9		
50	13.7	14.3	15.	13.4	13.	12.2	11.
40		13.7	14.4	11.3	12.2		
30		13.	12.4	10.	11.		
20		10.2	10.8	7.8	7.6		
10		7.	6.	6.1	5.1		
Low		4.	5.	5.	4.		
Number of Pupils	17	179	260	227	103	20	8

TABLE IVg

Seventh-Grade Boys

PERCENTILE	AGES 11	12	13	14	15	16
High		20.	20.	20.		
90		18.9	19.1	19.		
80		16.8	17.2	17.2		
70		15.6	15.5	15.4		
60		13.8	14.3	13.2		
50	12.5	12.5	12.	11.7	10.7	10.5
40		11.5	10.2	10.1		
30		10.3	9.3	9.		
20		9.2	7.5	6.3		
10		6.1	5.5	4.1		
Low		3.	4.	1.		
Number of Pupils	72	353	182	102	61	13

TABLE IVh

Seventh-Grade Girls

PERCENTILE	AGES 10	11	12	13	14	15
High		20.	20.	20.	20.	
90		17.9	19.	19.4	19.	
80		17.	17.6	17.4	17.8	
70		15.7	15.4	16.5	16.8	
60		14.9	14.	13.7	14.9	
50	13.2	13.1	13.2	13.	12.4	10.8
40		12.5	11.4	12.5	11.7	
30		12.	10.4	10.6	9.7	
20		11.4	10.	9.2	8.7	
10		8.3	5.6	6.	5.1	
Low		6.	6.	4.	3.	
Number of Pupils	35	205	460	197	103	17

TABLE IVi

Eighth-Grade Boys

PERCENTILE	AGES 12	13	14	15	16	17
High	20.	20.	20.			
90	17.6	18.4	18.1			
80	16.3	16.2	16.3			
70	15.3	14.7	14.6			
60	14.4	14.	13.1			
50	13.6	13.2	11.8	10.	10.5	9.2
40	13.1	13.	11.5			
30	11.8	12.1	11.1			
20	10.3	11.3	10.2			
10	7.9	9.4	8.7			
Low	4.	5.	0			
Number of Pupils	136	256	102	33	21	13

TABLE IVj

Eighth-Grade Girls

PERCENTILE	AGES 12	13	14	15	16
High	20.	20.			
90	18.2	18.5			
80	16.9	17.6			
70	15.7	16.3			
60	14.6	15.2			
50	13.1	13.9	11.6	12.3	10.5
40	12.7	13.2			
30	11.9	12.6			
20	11.4	12.			
10	8.	10.2			
Low	6.	5.			
Number of Pupils	109	325	65	51	34

History
Philosophy

ÆSTHETICS AND CIVILIZATION[1]

HERBERT C. SANBORN
Vanderbilt University

II

In man Schiller finds as ultimate abstractions two aspects, permanence and change—the person or self and its changing states. Taken absolutely, these are one and the same, but are distinct in the finite, and neither is derivable from the other. Hence, personality must be conceived as self-grounded or free, while our thought of change is based on the concept of time. The person revealed only in the ego-aspect cannot change or begin in time. Time begins in it, and the possibility of change in time resides in the introjection of permanence into phenomenal process. Only by virtue of phenomenal process does man *exist*, but only by virtue of his permanence is *he* the subject of change. Considered in abstraction from the content of experience, his personality is merely formal and potential; while his sense-life, abstractly taken, is mere nature, or, as Schiller says, *world*. The human problem is to realize this potentiality in the world of sense, giving form to the merely natural, under the driving force of two instincts, which Schiller calls, respectively, the "sense-impulse" (der sinnliche Trieb) and the "form-impulse" (der Formtrieb). The former demands change of sensation or variety; the tendency of the latter, which is grounded in the absolute reality or rational nature of man, is to free him by harmonizing the variety of his phenomenal existence. Personality is maintained by raising the flux of changing states to the plane of law (universality and necessity), while the individual, treating any moment of his life as eternity, identifies himself in judgment and action with the species. The problem of culture is the rational unification of these two tendencies, whose antithesis is only apparent; and the possibility of approximate empirical realization of this ideal would be given in experiences in which the consciousness of freedom and the perception of existence should be simultaneous. Conscious of himself in these as materialized spirit or as spiritualized matter, the individual would have a complete intuition of

[1]The second section of the Presidential Address read before the annual meeting of the Southern Society for Philosophy and Psychology, March 30, 1923. The paper will be concluded in the March number.

his humanity, and the object producing this effect would be for him a symbol for the complete realization of his destiny. Granting the reality of such experiences, they would arouse in him a new impulse, opposed both to the sense-impulse that demands change and to the form-impulse that abolishes time, the ground of change. Its tendency would be to abolish time in time, reconciling or synthesizing the transitory with absolute being, change with identity. This tendency is called by Schiller, harking back to Kant and Plato, the "play-impulse." The sense-impulse excludes from its subject all autonomy, submitting it to natural law and the domination of physical necessity; the form-impulse excludes dependence and passivity, imposing on the subject rationality and moral necessity. Only in the synthesis of the play-impulse is the individual freed from both natural and moral necessity.

The object of the play-impulse, as distinguished from the object of the sense-impulse (life in the material sense) and that of the form-impulse (pure form), is *living form* (lebende Gestalt). This concept, which is synonymous with beauty, is not, however, coextensive with the biological concept; for a block of marble, though inanimate, may receive living form at the hands of the artist, while a living man may not be a living form in the sense meant.[2] The analysis of beauty tells us nothing concerning its genesis. Reason must postulate it for the union of form and content in the concept of humanity. Only experience can show whether beauty and humanity exist empirically, but *how* they are possible is an unanswerable question both for experience and for reason. Beauty, as the consummation of humanity, is not exclusively life, as Burke and the empiricists assert, nor pure form, as dogmatism and painters like Mengs have maintained. It is the common object of both impulses in the play-impulse.

Play is characterized by freedom from subjective and objective compulsion, and is neither subjectively nor objectively contingent. In the intuition of the beautiful, man finds himself in a happy mean between law and need, freed from the imperious obligations of theory and practice. Although at first sight the limitation to mere play, which empirically may exist apart from taste, may seem perhaps incompatible with the dignity of beauty, the incongruity disappears through distinguishing æsthetic play from the practical games of everyday life. Play is an increase of life; and while man's attitude toward the agreeable, the good, and the perfect is serious, he plays with beauty. Reason demands that man shall *only play* with beauty

[2] An illustration of Schiller's meaning here is found in sculpture in the distinction between dead surfaces and those possessing "tactile values," and, in painting, between the face of a doll and that of a person.

and that he shall play *only with beauty;* for man plays only when human in the full sense of the word, and he is then only completely human when he plays. This is the spirit of accomplished humanity which the Greeks put even into their Olympian games and which they have left for us in the features of their statues.[3] While in ideal beauty form and content are perfectly balanced, we find empirically, according as the one or the other tendency predominates, either a melting or an energetic beauty. These correspond with the dual human need for relaxation and restoration of equilibrium. Disputes about beauty arise from confusion of the species with the genus. The antinomy of beauty is found in the demand of experience for mediation between sensation and thought, passivity and activity, matter and form, the particular and the general; while the concepts are taken so abstractly that no mediation is possible. The solution of this "central problem of æsthetics" is found by Schiller, as by Hegel later, in the insight that the two concepts are moments of a higher synthesis. Those who depend upon the guidance of feeling in their reflection can never get a *concept* of beauty, while those who depend exclusively upon intellect can never get a concept of *beauty.* The former fail to make distinctions in the total impression, and the latter, seeing only the results of analysis, miss the essential unity of mind and matter.[4]

Schiller distinguishes in man an unlimited determinability which becomes determined through a specific content; only by limitation do we obtain reality. In the transition from mere determinability or passive feeling to self-determination or active thinking there is a zone of indifference, like that between minus and plus in mathematical series. Here we experience neither moral nor physical necessity, although both these impulses are active, but, on the contrary, an especially free condition. This state of æsthetic freedom is not lawless, but its laws are not, as with logical and moral necessity, consciously presented. This æsthetic determinability resembles the mere lack of determination in the exclusion of all determinate existence; in other respects they are opposed as the infinitely empty to the infinitely full. This state brings us no specific theoretical or practical results,[5] but it

[3] In the face of a Juno Ludovisi, Schiller says, in illustration, we find neither gracious beauty nor dignity, but both of these in union. The figure is perfectly self-centered, a completely isolated creation, as though in an extra-spatial realm, neither unyielding nor resisting. We find there no force to combat force, no gap where the transitory (Zeitlichkeit) may enter. Attracted irresistibly by the one aspect, held at bay by the other, we find ourselves simultaneously in a state of supreme calm and of supreme emotion, in which there arises that profound tenderness for which the understanding has no concept and speech no name.

[4] Briefe, 11-18.

[5] Schiller thought of art in the beginning as a means of direct moral training, but he had given up this position (cf. Br. an Koerner, December 25, 1788) before becoming acquainted with Kant.

restores to man the freedom surrendered in all determinate states. This "gift of humanity" manifests to us the *infinite potentiality of our being,* leaving to the energy of volition its empirical approximation. Nevertheless, as the general ground or possibility of all human functions, it has the highest moral and theoretical importance.

Since both truth and morality depend on freedom, the individual may pass from the plane of sense to the plane of rationality only by first becoming æsthetic. From the plane of sense to that of æsthetic the transition is infinitely more difficult than from æsthetic to logic; it must be effected in the first instance by nature, since the will can do nothing to produce its own conditions. This evolution in the individual and in the race has a physical, an æsthetic, and a moral stage, which Schiller finds approximated in empirical history, though fully aware that he is dealing with abstractions. Even in the physical stage, life is not left purely passive, but is already æsthetic through the active subjection of content to rational form. Dependence on perception, however, makes man a slave of necessity, lost in his object. In æsthetic reflection he distinguishes himself clearly from the world, setting it over against himself as an object of contemplation—his first liberal reaction to the universe. What previously governed him merely by force is now his *object;* once its slave, he is now its lawgiver. Sense and reason are here still in union, whereas in knowledge there is complete abstraction from the material and contingent in the pure object. Since beauty is both an object for us and a state of the subject (form because we contemplate, but life because we feel it), the æsthetic experience gives us the union of antitheses—passivity and activity, matter and form, finite and infinite, necessity and freedom—and hence the possibility of the most sublime humanity.

Freedom is due to æsthetic experience, not vice versa; it comes to the savage as a gift of nature and of circumstances favorable to leisure. This "initiation into humanity" is manifested by the savage through joy in the appearance of things (die Freude am Schein), a love of ornament and the inclination to play, which is absent from the extremes both of brute stupidity and of intense intellectual activity; for both of these aim at real content. Since appearance is a strictly human product, this joy in appearance is joy in human activity. Æsthetic appearance can never endanger truth as logical appearance can, for it never claims to be anything but appearance.[6] Schiller

[6]Selenka (Der Schmuck des Menschen, p. 62) probably has this passage of Schiller in mind when he writes: "Freiere Beweglichkeit, wechselvolleres Empfinden und darum auch mannigfaltigeren Schmuck gestehen wir dem weiblichen Geschlechte zu, ja, wir gestatten und wünschen ihm ein grösseres Masz von 'schönem Schein,' der trotz offenkundiger Erdichtung uns zu erfreulicher Illusion verleitet———ganz im grellen Gegensatz zum Betrug und zur Lüge, welche den Schein absichtlich für Wahrheit ausgeben, wie dies z. B. vom Schminken gilt. Der wahre Schmuck bleibt immer ein naturgemäsz angepasster, daher erlaubter moralischer Schein!"

agrees with Plato's distinction of æsthetic and nonæsthetic senses, saying that man is raised from the plane of brute reality through nature by means of the eye and the ear. The object of touch is a force with which we are in immediate reaction, while the object of sight is a *form* which we create. With the enjoyment of seeing for seeing's sake, man is already on the plane of æsthetic with the play impulse aroused; but he reveals a keener consciousness of the distinction between appearance and reality when he imitates and thus gives independence to the natural object. On the highest plane of æsthetic, the artist, respecting only the law of his humanity, abandons imitation and manifests his freedom by isolating what nature gives in integration and uniting what nature presents only in isolation. He possesses, however, in this realm sovereign rights only so long as he refrains from claiming for his creation theoretical or moral value. Appearance is æsthetic only when upright and independent—that is, only when it does not attempt to pass for nature or to rely on the assistance of nature. With natural objects æsthetic experience is possible only when in the judgment we disregard their reality. We must learn to regard the animated form as appearance and æsthetic appearance as living form. Æsthetic capacity betokens the presence of all other values; its absence in individuals and races is the sign of intellectual and moral worthlessness. The anarchistic protest, while justifiable against false forms, goes beyond the mark in its desire to return to nature and formlessness; for the protest is valid only because we are not yet able to value form exclusively enough, not because we place too much weight on form and æsthetic appearance. We shall continue to deserve the reproach until we are able to enjoy nature in all its forms without desiring them and can admire a work of art without asking for its purpose.

Even in the vegetable kingdom there is a glimpse of freedom in the lavish production of buds and other parts of plants, while, on the animal plane, the creature works under the motivation of needs, but plays when impelled by superfluous life forces. Physical play, in the form of free movements, in themselves both purpose and means, forms the transition to æsthetic play; and there is also a formless play of ideas governed by natural laws (of association), preluding the free play of creative imagination and separated from it by a gap. Even æsthetic play in its first halting attempts is comparatively lacking in form. Hence, crude taste is sensational, lacking poise, and reveling in novel and surprising effects, loud colors, and sentimental songs. In the earlier stage the beautiful is what calls forth man's activity; but soon, not satisfied with having things please him, he seeks to make *himself* pleasing. He does this at first with what he *has* and then with what

he *is*, with adorned weapons and utensils at first and then with an adorned person.[7] The lawless leap of joy and the awkward gesture develop into the dance and graceful pantomime; the confused vocal expression of his emotion becomes rhythmic and lawful in the song.[8] Unrestrained use of power gives way to a chivalrous spirit in which the conqueror spares his unarmed enemy. In the dynamic state of society man meets man with force, in the ethical state of duty with the majesty of the moral law, while in the æsthetic form of society men are united into a brotherhood. Taste alone can organize society by producing harmony in the individual. The senses and the intellect put men asunder; only the community of æsthetic life unites. The pleasures of sense are enjoyed by us as individuals, the pleasures of knowledge we enjoy as genus, and then only imperfectly because of the personal equation; in the experience of beauty the particular and the universal are united, and under its magic influence all men forget their limitations. The æsthetic form of society leads from the blind, natural, dynamic state to the rational form of society governed by absolute moral necessity. This æsthetic community, in which the ideal of equality is realized, exists as a need in every person of taste.[9]

[7]According to the investigations of Ernst Grosse (Die Anfänge der Kunst, S. 111), the order of development given by Schiller must be reversed, the adornment of the body and tattooing coming first.

[8]Schiller's view that music and song develop from impassioned speech was held by Rousseau, Spencer, Karl Groos, and Konrad Lange, but was rejected by Darwin, and has since been proved incorrect by Stumpf and Wundt. A further suggestion by Schiller that the song of birds indicates joy in life may be partly true; but since canary birds sing at each other apparently in anger or in a challenging mood, as cocks crow at each other, it seems that their song may well express something less specific than joy.

[9]Briefe. 19-27.

Measurement
School MARKS.

A STUDY OF SCHOOL MARKS

L. A. SHARP

Superintendent of Coöperative Extension Service for University of Colorado, Colorado State Teachers' College, and Western State College of Colorado

INTRODUCTION

The following outline presents a brief résumé of topics discussed:

1. Why the Study Was Made.
2. The Nature and Scope of the Study.
3. How the Data Were Secured.
4. How the Data Were Treated.
5. The Distribution of School Marks by Teachers and Subjects.
6. The Meaning of School Marks.
7. The Distribution of School Marks by Subjects.
8. The Distribution of School Marks by Years.
9. A Comparison of the Distribution of School Marks by Sex.
10. Summary.

WHY THE STUDY WAS MADE

This study was made with the hope of securing data that would shed some light upon the meaning of school marks. Every one connected with school work is more or less interested in marks. All through the grades, high school, college, and graduate school, students' marks are zealously watched and interpreted. The high-school principal must have a transcript of the pupil's grammar-school marks. The dean of the college requires that a statement of the subjects pursued and the marks made in each, while in high school, be placed on his desk, that he may wisely and justly judge the individual as to whether or not he is fit college material. The director of the graduate school must have a look at all previous marks before the ambitious individual can be registered for a higher degree. Institutions often print statements in their catalogs in regard to grades. The following are illustrations: Pupils making a mark of AA, the highest mark given, will receive 20 per cent extra credit. Instead of receiving 4 hours of credit for a 4-hour course, they get 4.8 hours of credit. A adds 10 per cent, B adds nothing, C takes away 10 per cent, D takes away 20 per cent, and F fails. Another institution requires an average of 1 honor point for each course taken, if a student would graduate. A gives 3 honor points, B gives 2, C gives 1, D gives 0, and F gives —1. Practically all institutions issue statements to the effect

that graduate students will be required to make marks above the average; otherwise no credit will be allowed. The following excerpt is an illustration: "Graduate students taking courses regularly open to advanced undergraduates will not receive credit for such work unless they attain a mark of 80 per cent."[1] Another institution states that no credit will be allowed a graduate student who makes a mark below B. What are the results of such statements? Just this: Pupils make high marks with little effort under one teacher and low marks with extra effort under another teacher. As to graduate students, it means that those who try will receive the required marks; if the instructor's normal marking system is too severe to permit it, he marks by a more lenient system. "The grade of passing means the minimum amount of work which will be accepted for a given course. Whether the passing mark is 60, 70, or 75 makes relatively little difference."[2]

THE NATURE AND SCOPE OF THE STUDY

This is a study of the marks assigned in the first semester, 1922-1923, by forty teachers in the city high school of Knoxville, Tenn. These marks were studied from the standpoint of their distribution by teachers, their distribution by subjects, their distribution by years, and their distribution by sex. There are a total of 5,976 subject marks considered. The following is the marking system used in the Knoxville city high school:

A—Among strongest group of the class; excellent prospects for advanced training.
B—Above the middle group of the class; very good prospects for advanced training.
C—Among the middle group of the class; the student should not be satisfied to remain here.
D—Below the middle group of the class; conferences with class teacher and home-group teacher are suggested.
F—Failing in work; necessary to repeat work.

HOW THE DATA WERE OBTAINED

Each teacher's class record book was secured, and from this the semester mark that had been recorded by the teacher after the pupil's name was copied. While copying these marks, it was observed that a number of names had no semester mark recorded after them; but, instead, the teacher had written: "Left School," "Dropped Out,"

[1] University of Colorado, *Bulletin*, 1922-1923, p. 226.
[2] Eaton: "A Study of School Marks." *Education*, June, 1923, p. 620.

"Quit." These are designated in the tables by the letter L and are classified as subject failures throughout the study.

HOW THE DATA WERE TREATED

The total of each mark given by each teacher was found and converted into a percentage on the basis of class enrollment. The same procedure was followed in each classification made. Therefore the sum of the percentages of A, B, C, D, F, and L should be 100 under each heading in every table.

If any reader feels that the percentages are not figured on the proper basis, he can change the basis to marks actually assigned by teachers by the use of the following formula:

$$\text{Per cent of mark assigned by teacher} = \frac{\text{Per cent of mark in table}}{100\text{—per cent of L in table}}$$

Example from Table I:

$$\text{Per cent of A assigned by teacher 1} = \frac{21.9}{100\text{—}3.9} = 22.79$$

MEANING OF SCHOOL MARKS IN THE LIGHT OF TABLE I

Table I tends to show that very little reliability exists in school marks. It also tends to show that the distribution of marks is no more consistent in the same subjects than in unrelated subjects. Each teacher seems to have a yardstick of his own construction, and measures with it faithfully, never stopping to observe that it does not agree with the measuring instrument used by any one else. This situation is due to the fact that there is no standard for measuring and estimating the value of specific performances called for in the ordinary examination and classroom recitation. If some one says that John measured the width of a certain lot and found it to be 100 feet, there is no doubt about the width of the lot. He used a standardized instrument for making the measurement; others would measure it by the same. But if some one says that John graded a certain arithmetic examination paper and gave it a mark of 80 per cent, there is very little likelihood of any one else's assigning the same mark. Why? Because there is no objective standard for comparison. One teacher thinks that a problem deserves 5 per cent because the pupil used the correct principle. Another thinks it deserves no credit because there is a slight mechanical error. Each is sure that his system of marking is correct.

Before school marks can have a definite meaning there must be a standardized measure developed, and teachers must be taught to use it, just as children are taught to use the foot rule. A teacher should not only have a definite plan in mind for marking papers, but this

plan should be carefully worded and lying before him as an instrument for determining the proper mark when grading papers. All the teachers in a system teaching the same subject and marking papers of the same examination should have exact copies of the standard

TABLE I

THE DISTRIBUTION OF SCHOOL MARKS BY TEACHERS AND BY SUBJECTS IN THE CITY HIGH SCHOOL, KNOXVILLE, TENN.

TEACHER	SUBJECT	PER CENT OF EACH MARK GIVEN						
		A	B	C	D	F	L	F & L
1	Science	21.9	28.8	28.9	14.8	1.6	3.9	5.5
2	English	20.2	28.0	23.8	19.4	3.6	5.0	8.6
3	English	14.1	30.0	28.3	20.6	1.8	5.3	7.1
4	Latin	14.0	36.0	24.0	14.0	10.0	2.0	12.0
5	English	12.9	22.6	30.0	21.5	6.1	6.8	12.9
6	History	12.4	24.8	39.5	19.8	0.0	3.7	3.7
7	Science	10.9	14.9	16.7	26.4	17.8	13.2	31.0
8	Latin	10.8	21.6	25.2	17.3	15.1	10.1	25.2
9	Mathematics	10.8	11.5	12.8	21.0	29.0	14.9	43.9
10	Science	10.7	28.1	30.6	19.0	6.6	5.0	11.6
11	English	10.6	17.9	28.4	15.1	12.3	15.6	27.9
12	History	10.0	20.7	10.3	23.4	7.3	19.3	26.6
13	Math. & Latin	9.6	17.8	20.8	20.8	25.2	5.9	31.1
14	English	9.3	17.9	21.0	22.8	11.7	17.3	29.0
15	English	9.2	12.1	23.1	18.5	25.4	11.5	36.9
16	Science	8.9	13.8	24.8	26.8	14.8	10.9	25.7
17	Mathematics	8.5	15.4	21.8	20.2	20.2	13.8	34.0
18	French	8.3	21.9	37.3	21.3	4.7	7.5	12.2
19	English	7.8	21.1	40.5	17.5	4.8	8.5	13.3
20	Latin	7.5	9.5	18.4	15.4	29.6	17.8	47.4
21	History	7.1	17.2	23.7	29.3	10.1	13.0	23.1
22	Domestic Science	6.8	30.5	30.5	17.0	8.5	6.8	15.3
23	History	6.1	19.1	18.3	39.0	11.4	6.1	17.5
24	French	5.7	21.2	27.4	24.0	12.0	9.7	21.7
25	English	5.0	20.5	13.1	36.6	16.8	8.1	24.9
26	Mathematics	4.9	7.4	19.7	26.2	29.5	12.3	41.8
27	English	4.7	21.5	21.5	21.5	19.2	11.6	30.8
28	Science	4.5	12.2	14.8	29.6	21.9	16.8	38.7
29	Mathematics	4.3	24.0	18.2	16.6	20.4	16.6	37.0
30	History	3.5	10.6	8.4	33.1	31.0	13.4	44.4
31	Mathematics	3.4	18.3	22.8	29.8	9.2	16.6	25.8
32	English	2.9	21.8	21.2	11.8	26.0	16.5	42.5
33	Domestic Science	2.8	27.2	21.4	28.6	11.4	8.6	20.0
34	Science	2.3	8.0	19.0	23.0	41.5	12.1	53.6
35	Science	1.9	16.5	28.2	26.2	13.6	13.6	27.2
36	Mathematics	1.8	7.8	15.6	30.0	28.8	16.2	45.0
37	Mathematics	1.4	7.0	12.5	24.3	25.8	29.2	55.0
38	Commercial	.9	14.4	23.0	25.0	23.0	13.5	36.5
39	Commercial	.6	17.4	27.8	29.6	4.5	20.0	24.5
40	Domestic Art	.0	14.4	13.3	39.8	19.8	13.3	33.1
Median		7.3	18.1	22.3	22.5	14.6	12.2	26.9
Q		3.6	4.33	4.83	4.98	8.1	4.38	10.28
Quartile three		10.65	22.25	28.00	27.70	24.10	15.90	36.95
Quartile one		3.45	13.60	18.35	18.75	7.90	7.15	16.40
Upper extreme		21.9	36.0	40.5	39.8	41.5	29.2	55.0
Lower extreme		0.0	7.0	8.4	11.8	0.0	2.0	3.7

and use them to determine the correct mark. Such a measuring instrument may not be as exact as a foot rule, but it will tend to decrease the variation of school marks assigned by different teachers.

THE DISTRIBUTION OF SCHOOL MARKS BY SUBJECTS

Table II shows the percentage of each mark assigned in each subject. Four years of English, three years of mathematics, and two years of science are required. It is interesting to note that the subjects showing the highest and the lowest percentage of A's are both elective. Latin shows the highest, commercial work the lowest. Two required subjects rank second and third. While Latin stands first in the percentage of A's, it also stands first with the highest percentage of F's. Mathematics, a required subject, stands first, with the highest percentage of failures (F and L taken together). Two electives follow, then the other two required subjects come. This table tends to show that the percentage of A's is not any higher in electives than in required subjects, and that the percentage of failures is just about as high in one as in the other. It also tends to show that a high percentage of A's does not necessarily mean a low percentage of F's in that subject, and *vice versa*.

TABLE II

THE DISTRIBUTION OF SCHOOL MARKS IN EACH SUBJECT

SUBJECT	% A	% B	% C	% D	% F	% L	% F & L
Latin	11.5	17.5	22.4	15.7	21.9	11.0	32.9
Science	9.3	16.6	21.1	23.4	18.4	11.3	29.7
English	9.1	21.8	24.5	20.2	13.4	11.0	24.4
History	8.1	17.9	22.6	28.9	11.2	11.2	22.4
French	7.9	21.8	32.6	21.8	8.2	8.2	16.4
Mathematics	5.0	13.6	18.6	24.6	21.6	16.6	38.2
Domestic Science	2.7	22.7	20.5	30.0	14.1	10.0	24.1
Commercial	1.0	16.7	26.7	24.0	15.1	16.7	31.8
Median	8.0	17.85	22.5	23.7	14.45	11.1	27.05
Q	2.68	2.58	2.4	3.13	3.85	1.73	4.53

THE DISTRIBUTION OF SCHOOL MARKS BY YEARS

Table III shows the distribution of school marks in each year, in the 1B class, and in the school as a whole. The percentage of A's in the first year is 6.2; in the second year, 5.8; in the third year, 8.3; and in the fourth year, 13.8. In the 1B class the percentage of A's is 6.1; for the school as a whole, 7.6. The percentage of B's is smallest in the first year, 14.8, and gradually increases until it reaches 25.1 in the

fourth year. The percentage of F's is highest in the 1B class, 23.5, and decreases until it reaches only 4.4 in the fourth year. The percentage of L's is .3 higher in the second year than in the first, but in the third and fourth years, respectively, there is a decrease. The percentage of failures (F and L taken together) decreases from 39.8 in the 1B class to 36.4 for the first year as a whole, and to only 8.7 in the fourth year. It is interesting to note the small decrease in the percentage of failures the second year and the large decrease in both the third and fourth years. The marks assigned the school as a whole are: 7.6 per cent A, 18.2 per cent B, 22.9 per cent C, 23.1 per cent D, and 28.3 per cent failure (F and L taken together). According to Starch, the percentage of each mark assigned should range about as follows: 7 per cent A, 24 per cent B, 38 per cent C, 24 per cent D, and 7 per cent F (failure), the normal probability distribution.

TABLE III

THE DISTRIBUTION OF SCHOOL MARKS IN EACH YEAR

YEAR	% A	% B	% C	% D	% F	% L	% F & L
First year	6.2	14.8	20.3	22.3	21.7	14.7	36.4
Second year	5.8	17.4	19.9	23.3	18.6	15.0	33.6
Third year	8.3	20.8	25.7	25.2	10.1	10.0	20.1
Fourth year	13.8	25.1	30.3	22.2	4.4	4.3	8.7
1 B Class	6.1	15.1	19.0	19.8	23.5	16.3	39.8
Entire School	7.6	18.2	22.9	23.1	16.0	12.3	28.3

Table III may also tend to show that the school performs two distinct functions: that of locating and eliminating those individuals who are inferior and not capable of holding their own in competition, and that of increasing the efficiency of those who are superior.

A COMPARISON OF THE PERCENTAGES OF EACH MARK RECEIVED BY GIRLS AND BY BOYS, AND QUESTIONS ON THE FINDINGS

Table IV shows some interesting facts in regard to marks received by girls and boys. In every case the percentage of A's received by girls is higher than the percentage of A's received by boys. The same statement holds true for the percentage of B's. Similarly, the percentage of D's and the percentage of F's, respectively, received by girls is lower than the percentage received by boys. A detailed study of the marks received by girls and by boys in all the different subjects taught in the school shows that the girls received a higher percentage of A's than boys in 19 of the 25 subjects, a higher percentage of B's

in 24 of the 25 subjects, and a higher percentage of F's in only 1 of the 25 subjects.

TABLE IV

THE PER CENT OF EACH MARK RECEIVED BY GIRLS AND BY BOYS IN EACH YEAR

MARK	First Year		Second Year		Third Year		Fourth Year		Entire School	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
A	3.2	8.7	3.5	7.6	4.0	10.9	11.6	15.5	4.7	9.9
B	10.3	18.4	12.9	20.9	13.0	25.6	16.3	31.9	12.4	22.7
C	20.8	20.0	16.9	22.3	22.8	27.5	31.0	29.7	21.6	23.7
D	23.8	21.1	27.0	20.3	31.3	21.3	29.4	16.5	26.8	20.2
F	25.7	18.3	22.7	15.3	17.2	5.7	7.9	1.6	20.8	12.3
L	16.1	13.5	16.9	13.6	11.7	9.0	3.9	4.6	13.8	11.2

What are the reasons for the facts brought out in Table IV? Are girls more intelligent, more industrious, more studious, more anxious to please their teachers, more afraid of criticism, and more willing to undergo drudgery to make high marks than are boys? Or is it possible that the schools have become effeminated—that because the teachers are mostly women, these teachers have selected the subject-matter that appeals to them and have presented it by methods that convey the ideas most clearly to the feminine type of mind? Could it be that the things that appeal to the masculine mind have been pushed aside to give place to the more feminine elements? Is it possible that the school is unconsciously tending to effeminize the boys and young men, and that the process of effecting this change becomes so obnoxious to many of them that, rather than submit, they elect to be labeled inferiors and incompetents? The cause must be determined before the observed fact can be eliminated.

SUMMARY

A concise summary of this study is contained in the following statements:

1. All teachers and students take school marks seriously.
2. School marks are considered to be labels that discriminate the grain from the chaff.
3. A passing mark indicates the minimum amount of work acceptable in a given course.
4. School marks are unreliable indices of an individual's ability.
5. One teacher will give a high percentage of high marks, while another teacher will give a very low percentage.
6. A standardized measuring instrument is necessary to put meaning into school marks.

7. There is a wide fluctuation in the percentage of each mark given in different subjects.

8. High marks are not found more frequently in elective than in required subjects.

9. A high percentage of high marks does not necessarily mean a low percentage of failures, and *vice versa*.

10. The highest percentage of failures is in the freshman class, and the percentage of failures decreases throughout the four years.

11. The highest percentage of "excellent" and "good" marks is made by the upper-classmen.

12. The school tends to eliminate the incompetents from its midst, school marks being used as indices.

13. A higher percentage of girls than of boys makes "excellent" and "good" marks, and a lower percentage of girls than of boys fails.

14. Why does a higher percentage of girls than of boys make "excellent" and "good" marks?

Language Arts
Outside Reading

AN EXPERIMENT IN FRESHMAN HOME READING

BONNIE GILBERT
Chattanooga High School

"After all, we never succeed in education until our aims have become the child's aims, until our purposes have become his purposes," says William Henry Pile, in his *Psychology of Learning*. This applies to an experiment I made in outside, or home, reading during the past year with a class in ninth-grade English. In spite of several years' experience in teaching English in which home reading was required, I never felt that I managed that part of the work successfully, even satisfactorily. It persisted in feeling like a thing apart—an alien in an otherwise pleasant community. I had no way of checking up on it except through written reports—a device not only stilted, formal, and unnatural, but also unproductive of good in that grade. I speak only for myself on that point, however.

One day near the opening of school I picked up in the corridor outside my door a folded piece of printed matter. Its soiled, worn appearance gave evidence of its having been carried much in a pocket. So before dropping it into the wastebasket I unfolded it, and found it to be a page from some book catalog. That was nothing unusual, of course; but the number of books checked off was. There must have been nearly fifty marked off in stubby pencil. I examined the list, and found that all the books, so far as I could tell, were juveniles and belonged to that pariah class which, after we grow up and put on much learning, we style as "cheap." They were altogether unknown to me; I do not recall that there was listed even one that I knew by name. The titles vied with each other in proclaiming adventure, in speaking loudly of romance, and in hinting of love. With no more evidence than that the piece of paper was folded carefully and was worn and soiled and pressed with much carrying in a pocket, I came to the conclusion that it belonged to a boy and that it had served as his summer's reading list. That list of poor fiction represented one of my problems, so I kept it.

This was near the beginning of the term, and I had not yet introduced the subject of home reading. Although I had not yet talked with my new pupils about books, I knew from past experience that that list represented somewhat the kind of reading many of them were engaged in. Of course there were always the exceptions—some

few who read and enjoyed such books as *Pollyanna, Daddy Long Legs,* and maybe *The Call of the Wild,* with perhaps one or two who had read, or had started, or had heard about *Oliver Twist,* or even *Ivanhoe.* But the bulk of them, I knew, were engaged in reading of a shoddy nature. I wondered why they liked it; if I ever knew, I had forgotten. I decided to find out, and the only way was to read such books myself. I knew that I might not discover a great deal, but I believed I could get a better point of view toward that type of book and a power which would enable me to talk about them, facts in hand.

I began a series of little informal talks on books, using the worn, dirty list at first as my starting point, ostensibly trying to find the owner. I remarked about the great number of books some boy seemed to have read, casually reading off a few titles. Soon we were launched upon a series of delightful confidences about books—their books.

Right at first I think my pupils suspected my interest in their kind of books; and when I asked to borrow one a boy had talked up well, I felt their surprise. He brought the book next day, and I read it that night. The story had to do with two boys—young printers with no capital—who got into shape an old printing press, and, by hard work and fair dealing, captured the trade of a rival printer much better equipped, but who did business by underhand methods. There was nothing harmful in the book, except, perhaps, the influence it might have in showing up the exaggerated success of two boys who needed to be in school. That much for the morals of the book. The other side—one which they could not appreciate, the technique—was poor in the extreme: a thin thread of a plot, pale characterization, maudlin sentimentality, and the whole clapped together hastily—characteristic of its fellows.

I could not read everything the children offered me, but I read enough to strengthen their confidence in what I had to say when I talked with them about their books. I need not add that I refrained from criticism.

We decided to make our book talks a feature of our regular work. So we organized into little groups. These we called "clubs"—book clubs—organized for the sole purpose of getting pleasure—just pleasure from reading and talking about books. Together we worked out a plan. We would meet twice a month; each member would keep an account of the books he read, using cards for the purpose; and one of the club members would be librarian and take care of the records.

We had a great time "getting ready." Each club provided itself with cards of uniform size, some cutting theirs out of heavy paper, others using correspondence cards, while some got standard office filing cards. A boy in one club made a nice filing box by cutting

down a cigar box; another cut down a candy box; two clubs by "chipping in" bought office files of small size; others borrowed theirs from home. It was interesting to watch how they managed.

To be brief, we found that four clubs could hold meetings in the same room at the same time without interfering with each other. We made the most of space by having each group sit facing in, as much as the fixed seats would allow. The fact that we had to talk in undertones was no handicap; besides, it furnished a lesson in consideration for others. Many of the pupils brought their books, and I observed that those clubs where books with illustrations were present had an improved quality of interest over clubs with few books or books without illustrations. In my visits from one club to another I frequently heard requests for the loan of books. In such cases I took particular pains to suggest care of the book and a prompt return of it, for I know of no greater annoyance of its kind than to lend a book and lose it.

As to the class of books brought to the clubs, they were, on the whole, encouraging. Certainly there was nothing "trashy." Several of the popular series made their appearance from time to time, and I always tried to give face to them and make them welcome for the sake of their owners, who had brought them in good faith. To say the least, in every case, the situation was more pleasant, more natural, and more interesting than any day of formal book reports I had ever had. There was a freedom, an interest, and a social ease I had never been able to get outside of imagination. When I would drop in at this club or that for a few minutes, as I did constantly, to observe, to listen, and to learn, I did not seem to take repression along with me, and I felt as if I really "belonged." As opportunity presented itself, I tried to ask the same kind of questions that they asked and to show the same kind of interest. Where I found any one member attempting to go too much into detail, endangering the active interest of the club, I asked a pivotal question that turned him off and some one else on.

I wanted as natural a reaction from the experiment as I could get; so I refrained from asking questions of opinion regarding the clubs. I knew that if the plan met their needs I would hear about it, and that what I would find out would be the truth and not diluted with a desire to "please the teacher." I heard. They liked the plan so well that they wanted to have more club meetings than we had time for. It would be a wonderfully stimulating influence in our lives if we grown-ups could keep that youthful ability to "plunge soul-forward, headlong into a book's profound," and then exult in talking it over again and again afterwards as children do.

The club plan had some helpful by-products in the way of training in initiation. Each group tried to improve on the filing of reading records. They devised different ways of cutting the tops of the guide cards; some were cut away on the left side, some on the right, and others on both, leaving the center tops for the pupils' names. As time went on and the idea of the whole scheme took firmer hold, many of the pupils began to show individuality in the matter of filing their reading cards. Some made sub-guide cards and separated their readings by American and English authors; others subdivided theirs into stories for boys and stories for girls, novels, and biography. These file boxes were kept on shelves, with blank cards filed to the back. The pupils felt free to consult them at any time and to record a book read.

About the only duties devolving upon the librarian of any club was that of caretaker for the records and posting from time to time a little graph showing how his group stood with reference to the number of books read. I took care that the element of rivalry did not enter into this experiment. Rivalry has its place in educational methods—a very important one—but in the matter of helping children to learn to enjoy reading it could easily cheapen the method and defeat the aim.

Occasionally we had little general talks about books, not breaking up into clubs. This afforded opportunity for unifying the plan. It was the time for all members to hear about the "best" books. It was also my time for making capital out of what I had learned about their budding interests. I read bits here and there from books I wanted them to like. I also chose these occasions to broadcast any innovations I had discovered any group introducing to improve the way of conducting their clubs or of keeping records. Children respond most readily to suggestion if made in the way of commendation.

The idea got about that reading was a sort of stairstep arrangement, and that those who read the juvenile series books were somewhere way down about the foot, but that those who were reading Kipling, Mark Twain, Dickens, and Scott were somewhere away up ahead. This idea was not without value.

Schoolroom situations which provide natural stimuli for expression on the part of the pupils frequently afford stimulating excursions into unexpected fields of interest. One such, connected with our reading plan, started with a remark by a pupil to the effect that he had read all of Francis Lynde's books—Francis Lynde, the novelist and writer of stories for boys. The discussion which followed brought out the fact that most of the class were familiar with one or more of these books. The result was that little appreciations from each reader of Mr. Lynde's books were collected, typewritten, and

sent to Mr. Lynde himself, with a letter of explanation. The beautiful reply he made amply repaid the children for their efforts.

A factor not to be overlooked in this experiment, and which served no small part in helping to raise the reading level, was posters. These were made from advertisements cut from magazines, from Sunday supplements, and from publishers' leaflets which I collected from friends. I made a special effort to secure good-sized photographs of authors and lists of their works. These, properly placed upon neutral-toned construction paper and set off with bold print, were very attractive. The pupils themselves made some very nice ones.

As to the record cards of the reading plan, I found the little synopses on the file cards to be one of the best experiences in composition that the whole course afforded. I took pleasure in comparing some of them, picked at random, with similar parts of formal book reports of a class of juniors. Some of the freshman reports showed real skill in subordination of ideas—a difficult problem. In no case did I yield to the temptation to make use of those reading cards as lessons in composition. I was afraid of attaching unpleasant associations with them. Whatever we did in the way of drill on form, we got from composition work other than the reading cards. I built up around them a respect that was incompatible with reproof. We assumed, if there was any conscious thought about the matter, that conventions of form would be observed. I felt that dragging in such details would becloud the issue—that it had nothing, in fact, to do with it. Our aim was appreciation, pure and simple, of books. Children's efforts are based so much on the emotions that to risk short cuts is sometimes to challenge failure. English is a subject which is beset with temptations to kill, not two birds with one stone, but two dozen. No small part of the poor results in this field is chargeable to trying to teach too much at a time—crowding rule upon rule and injunction upon injunction. Often in this way we set up in the pupil wrong emotional tones which not seldom terminate in disgust. So our reading cards were associated with books, not with composition.

I feel warranted in saying that in our case the book-club plan has proved a success for such uses as we have put it to. The pupils have gotten both pleasure and profit from it. They like it—a fact which is half the battle in any pedagogical undertaking. At the beginning of this year I purposely waited to see if they would ask for the plan again. They did. The present clubs show improvement in organization and in initiative over those of last year. One club decided to have their long oral themes given under the auspices of the club; so they appointed a committee of two—a boy and a girl—who drafted a schedule, giving each member a date upon which he would be expected

to give his theme. They posted this for reference. It was their idea altogether. They call themselves the "Almega Book Club," a name they formed from Alpha and Omega, after numerous meetings of the naming committee. For their motto they chose, "We See It Through." Another club, equally ambitious, decided to have pins; so they designed them, obtained bids from a badge concern, ordered them, and presented me with one. I prize it, too, but for a reason they little suspect.

Although I have no way of proving that my pupils read more books by the club plan than they would without it, I feel convinced they do. There is no doubt that books become more of a common interest in this way. The clubs also bind them together in a very sound, wholesome, social relation. Aside from this, the clubs lend themselves to setting up a variety of teaching situations. A resourceful teacher can use them as attractive cloaks to disguise many unwelcome pedagogical relatives.

After all, whatever reading plan we may devise, our aim is to enrich the child's experience by means of acquaintance with good books. And as trying to pull children up to our reading level is usually not only disappointing, but unprofitable as well, it seems that we are not only justified, but are even forced, to get down on the children's level and help them in whatever ways they understand.

Citizenship

GOOD CITIZENSHIP ✓

ROBERT ALEXANDER CUMMINS ✓
University of Southern California

This paper offers an empirical analysis of the concept "Good Citizenship" and reports the results obtained from a completion test in good citizenship based on this analysis, which was given to 434 teachers and college students in the summer of 1923.

I

ANALYSIS OF THE CONCEPT "GOOD CITIZENSHIP"

Accepting the general proposition that the ultimate end in education is good citizenship, let us raise the question as to what particular traits combine to make the good citizen. In our analysis we shall utilize the long-established classification of human behavior into knowledge, feeling, and action.

A. *Knowledge Factors in Good Citizenship*

1. A good citizen should possess a knowledge of the minimum essentials of a common-school education as represented by the curriculum of the first six grades.

2. If he is to take a leading part in the affairs of the community, state, or nation, he should possess at least the equivalent of a six-year secondary education—i. e., the junior and senior high school. Having achieved this much of formal education, other things being acceptable, a person should be entitled to the franchise of the ballot, on the ground that he is, by virtue of this training, as well qualified to exercise this right as he would be at the age of twenty-one, if then without the experiences represented by the high-school course. It should, however, be required, on the ground of maturity, that the high-school graduate be at least eighteen years of age in order to be entitled to the right of the ballot.

3. If one is to occupy a position of considerable importance—as, for example, in one of the learned professions, or as mayor of a city, or as representative of a large group of people in any walk of life—he should possess the equivalent of a college education, with appropriate university training.

4. A good citizen should possess a fair degree of knowledge of the

leading facts in the historical development of the community, the state, and the nation. For example, on moving into a new community or state, one should read some authoritative account of the historical development of that particular community or state. Likewise, on coming to the United States, one should inform oneself regarding the history of this country.

5. A good citizen should possess a fair degree of knowledge of the laws, customs, and traditions of the country, such as, for example, criminal laws, property and commercial laws, laws relating to marriage and divorce, the traditions surrounding the national emblem, and many other like things.

6. A good citizen should be reasonably well informed on matters of current events, particularly such matters as national relations, important public improvements, and all propositions coming before the people for decision at the polls.

7. A good citizen should have special knowledge of at least one vocation and at least two avocations.

8. A good citizen should be fairly well informed as to social usages, such as ordinary courtesies in traveling and at home, as to certain justifiable social distinctions, and as to a few of the more common rules of etiquette.

9. A good citizen should know how to participate in a number of pleasurable and healthful forms of recreation, such as sports, games, hiking, reading, conversation, and the like.

10. A good citizen should know how most profitably to employ his leisure time, not alone by engaging in those activities mentioned in No. 9 above, but also by undertaking useful forms of research and temporary service of various kinds in cases of emergency, with the idea of producing something that is needed by others while enjoying a vacation for himself.

11. Last, but not least, a good citizen should know how to control himself under various circumstances that he is likely to meet, and to discriminate carefully between the duties and obligations which he owes to home, church, state, and nation.

B. *Attitude Factors in Good Citizenship*

1. A good citizen should be a hearty supporter of decency, law, and order, both in conversation and in practice. For example, he should frown upon wrong attitudes manifested by others and commend desirable behavior. He should express his opinion in favor of the right when called for, and under certain circumstances he should raise his voice in favor of the right and against the wrong, even though the assertion be not called for by any particular person.

2. A good citizen should be duly appreciative of the welfare and the circumstances of others—for example, in the case of famine, pestilence, or other misfortune, or in case his own business happens to be of such a nature as to annoy or otherwise discomfit his neighbors, such as would very possibly be the case should a dairy be located in a residence section or a noisy shop near a hotel or hospital.

3. A good citizen should be ready and willing to assume the responsibility of a public office which he may be qualified to fill. The call of the people to public service he should not lightly put aside.

4. A good citizen should not only know how to be courteous and regardful, but he should also manifest a pleasant attitude in performing these duties.

5. A good citizen should be an enthusiastic and willing worker at his chosen vocation, but he should also be ready and willing to accept the inevitable in case circumstances should make it necessary for him to change his occupation.

6. A good citizen will not oppress others; neither will he stand in the way of those who by virtue of their superior ability and qualifications are able to forge ahead in the race for higher achievement.

7. A good citizen loves his own, reveres his elders, sympathizes with the unfortunate, is loyal to his country's flag, and is religious in the large sense of the term, at least.

C. *Habit-Formation Factors in Good Citizenship*

1. A good citizen should have the habit of taking due care of his health by (a) keeping a correct posture and maintaining a suitable appearance; (b) selecting a well-balanced and wholesome diet; (c) using approved forms of prophylactics and securing suitable treatment in case of illness; (d) correcting, so far as possible, any defects of mind or body which he may possess; (e) working hard; (f) playing with abandon; and (g) arranging his daily program so as to have adequate time for work, recreation, and rest and sleep.

2. A good citizen should possess (a) a fair degree of skill in the things of formal education, such as the tool subjects in the elementary curriculum, (b) the minimum essentials of a secondary education, if he is to take an active part in the more important affairs of the community, and (c) the power of applying many of the subjects taught in the college and university, in case he is to assume the function of leadership.

3. A good citizen should be skilled in at least one vocation and one or two avocations of an approved nature. For example, a skilled machinist might also be skilled in raising fine poultry; a teacher or musician might engage in selling insurance or in small farming; a

minister or a lawyer might engage in animal husbandry or in raising fine flowers as an avocation.

4. A good citizen should be able to take the initiative in cases of emergency, picking up the tasks of others for the time being and performing them as though they were a part of his own work.

5. A good citizen should be efficient in several types of recreation, such as those mentioned under A, 9 and 10, above.

6. A good citizen should possess at least a modicum of skill in the common forms of social usage, such as those needed in the entertainment of others on formal occasions or in participating in social functions of various kinds.

7. A good citizen should possess such traits as honesty, promptness, obedience, courtesy, and the like. He should also evidence self-control, aspiration for higher and better values, and a spirit of coöperation, and at the same time be contented with his lot, but never satisfied with his own achievement.

II

RESULTS OF A COMPLETION TEST IN GOOD CITIZENSHIP

A completion test, designed to test a knowledge of the concept "Good Citizenship" as here analyzed, was given in the form shown below to 434 teachers and college students in the summer of 1923.

A Brief Completion Test on Good Citizenship

Good citizenship is the chief aim of the (1)_____. Good citizenship not only implies a knowledge of the (2)_____, traditions, and (3)_____of a country, but also a proper (4) _____toward these fundamentals of (5)_____; hence, the function of the teachers is to (6)_____in the pupil an attitude of belief, respect, and loyalty toward the things for which our civilization stands. Since, however, people are judged not only by what they (7)_____, neither solely by what they think, it is necessary to include in our training for good citizenship provision for suitable (8)_____.

What teachers probably need more than anything else is a (9) _____(10)_____of the main (11)_____in education. This implies some understanding and grasp of the present-day movements in (12)_____, since, as a matter of fact, the aims of the (13)_____are largely (14)_____by the dominant modes of (15)_____.

Probably the best way, therefore, to get results in good citizenship would be to set up (16)_____aims and objectives and then

arrange the content of each subject in the (17)_____so as to correlate with the real (18)_____interests of the pupil, keeping the mind upon the (19)_____of (20)_____that is going on in the life of the child. Proper knowledge (21)_____ will stimulate desirable (22)_____, which, in turn, should lead to approved forms of (23)_____. This, then, is the (24) _____of the public school, and, when scientifically analyzed, will be found to be virtually the same as the goal set up by the better class of homes and the church under the title of (25)_____.

In a preliminary series, not reported here, this test was given to about 400 California superintendents, principals, and teachers. The actual words used by these in their answers were tabulated and judged by a committee of eight graduate students in the University of Southern California, and the decisions of this committee checked by the judgment of three college professors of education. The following lists of words, with the values assigned, constitute the key by which to score the test. Values of three, two, one, or zero are allowed for the filling in of each of the twenty-five blanks in the test. Thus the highest possible score is seventy-five and the lowest possible score is zero. No student of the more than eight hundred who have taken the test has scored either seventy-five or zero. In the key the figures in parenthesis indicate the values assigned to the words immediately following.

Key for Scoring Completion Test on Good Citizenship

Blank No. 1.—(3) school, public school, elementary school, secondary school. (2) society, curriculum, education, state, United States, educator. (1) individual, teacher, community, nation, America.

Blanks No. 2 and 3 (any two).—(3) customs, laws, ideals. (2) habits, ethics, government. (1) language, legends, institutions, culture, aspirations.

Blank No. 4.—(3) attitude, feeling. (2) respect, view. (1) pose, reaction, relationship, spirit.

Blank No. 5.—(3) society, good citizenship. (2) government, a nation, national existence. (1) progress, patriotism.

Blank No. 6.—(3) instill, inculcate, develop, establish, cultivate, implant. (2) create, inspire, encourage, arouse, stimulate. (1) train, drill, bring out.

Blanks No. 7 and 8 (any two).—(3) know, do, achieve, conduct, behavior, concepts, thought. (2) accomplish, express, activity, actions, instruction, education, response, habits. (1) adaptability, expression, adjustment.

Blanks No. 9 and 10 (any two).—(3) clear, broad, concise, thorough, complete, comprehensive, understanding, conception, knowledge, idea, concept, definite. (2) proper, right, full, careful, fundamental, concrete, grasp. (1) good, working, liberal, mental, keen, requirements, objective, consideration, appreciation, real, workable, better.

Blank No. 11.—(3) objective, aims, goals, purposes. (2) theories, factors, ends, ideals. (1) trends, principles, standards, concepts, functions, elements.

Blank No. 12.—(3) society, civic life. (2) civilized world, sociology. (1) world affairs, life, government, politics, civic training.

Blank No. 13.—(3) school, public school. (2) curriculum, profession, educator, state. (1) teacher, student, pupils, nation.

Blank No. 14.—(3) determined, controlled, influenced. (2) secured, affected, realized. (1) governed, judged, directed, fixed, guided.

Blank No. 15.—(3) society, social activity. (2) community life, people, citizens, everyday life, government, life. (1) thought, living.

Blank No. 16.—(3) specific, definite, concrete. (2) clear, high, worthy, scientific, standard, general, certain. (1) suitable, proper, practical, ultimate.

Blank No. 17.—(3) curriculum. (2) course. (1) program.

Blank No. 18.—(3) life, individual, vital, live, personal. (2) basic, native, social, dominant, natural, present-day, primary. (1) active, worth-while.

Blanks No. 19 and 20 (any two).—(3) development, process, stakes. (2) desires, trend, type, interests, kind, manner, ideals, period, growth, mode, attitude, value. (1) change, activity, nature, formation, habits, conduct.

Blank No. 21.—(3) obtained, instill, acquired. (2) supplied, imparted, assimilated. (1) of civics, concepts, well directed, of aims, organized, properly taught.

Blank No. 22.—(3) ideals, attitudes. (2) motive, responses, thoughts, action, ambition, aims, impulses. (1) training, conduct.

Blank No. 23.—(3) behavior, conduct. (2) action, activity.

Blank No. 24.—(3) purpose, aim, goal, objective. (2) problem, understanding. (1) function, mission, work, business, task, duty.

Blank No. 25.—(3) character. (2) morality, religion, loyalty, moral training, Christianity. (1) social efficiency, service.

Results from 434 Students

TABLE I.—Median score and standard deviation for each group, as classified on the basis of sex and position held. The mean and standard deviation from the mean are also given for the totals, men and women combined, for each professional group.

PROFESSIONAL GROUP	SEX	NO.	MEAN	MEDIAN	SIGMA
Superintendents and Principals	M	122	--------	42.00	9.3
	F	39	--------	39.00	8.3
	All	161	41.60	41.25	9.8
High School Teachers	M	28	--------	39.75	8.0
	F	87	--------	41.67	8.4
	All	115	41.60	41.06	9.4
Elementary School Teachers	M	17	--------	32.25	9.3
	F	91	--------	34.17	10.1
	All	108	34.57	33.67	9.3
Inexperienced Students	M	12	--------	31.00	11.1
	F	38	--------	30.83	10.7
	All	50	22.28	31.00	9.2

Table I classifies results obtained from 434 students. The median scores made by the various groups range from the highest to the lowest in the order in which the groups are listed in the table. The superin-

tendents and principals' group and the high-school teachers' group show approximately the same median, both being above the median for the total group, as shown in Table III. On the basis of sex, the men excel the women in the superintendents and principals' group and in the inexperienced students' group, while the women excel the men in the other two groups. A comparison of the mean and the median shows only slight differences, except in the case of the students' group. In this group the mean is lowered considerably by the large number of low scores made.

The standard deviations for the four professional groups show a close agreement, the highest sigma being 11.1 for the inexperienced men and the lowest sigma being 8.0 for the men high-school teachers. While the highest and the lowest sigmas occur in the case of men groups, the sigma for all the men taken together, as shown in Table III, is 9.5, as against 10.1 for all the women taken together.

TABLE II.—Median score and standard deviation for each group as classified on the basis of sex and age. The mean and standard deviation from the mean are also given for the totals, men and women combined, for each age group.

AGE GROUPS	SEX	No.	MEAN	MEDIAN	SIGMA
36 years old and up	M	46	--------	42.50	8.5
	F	45	--------	42.00	10.0
	All	91	41.55	42.10	9.1
30 to 35 years old	M	58	--------	41.50	10.2
	F	36	--------	40.62	9.1
	All	94	40.79	40.70	9.5
24 to 29 years old	M	56	--------	39.50	8.9
	F	58	--------	37.50	10.7
	All	124	38.58	38.10	9.6
18 to 23 years old	M	19	--------	31.50	8.3
	F	106	--------	32.80	10.5
	All	125	33.22	32.58	10.3

Table II presents a close analogy to Table I. The upper two age groups show little difference in the median scores made, both being above the median for the total group, as set forth in Table III. On the basis of sex, the men excel in all except the lowest age group—viz., 18 to 23 years of age. Between the means and the medians there are only slight differences.

Table III shows the men as a group to have excelled the women as a group by a margin of 4.51, based upon the median achievement, and a margin of 2.18, based upon the mean, or arithmetical, average. The standard deviation for the women slightly exceeds that for the men.

TABLE III.—Median and standard deviation from the median, mean and standard deviation from the mean, for each total sex group and for the total group, men and women combined.

GROUP	SEX	No.	MEAN	MEDIAN	SIGMA
All	M	179	39.91	40.12	9.5
	F	255	37.73	35.61	10.1
Total men and women		434	38.28	38.27	10.3

The mean and the median for the entire group of both men and women are almost identical.

The distribution of scores made is approximately symmetrical. Because of the small number of cases for each of the age and professional groups, detailed distribution tables are not given. Keeping in mind that the lowest possible score is zero and the highest possible score is seventy-five, the range of scores made by the entire group of 434 teachers and students is, however, here presented.

SCORE	CASES	SCORE	CASES
0— 5	0	41—45	72
6—10	1	46—50	55
11—15	6	51—55	37
16—20	15	56—60	14
21—25	23	61—65	3
26—30	55	66—70	0
31—35	75	71—75	0
36—40	78		

School Finances

A STUDY OF THE RELATIVE ELEMENTARY AND HIGH-SCHOOL COST PER PUPIL IN THIRTY TENNESSEE SCHOOLS

JOE JENNINGS
Associate State Supervisor of High Schools, Tennessee

This study includes thirty-nine high schools and the elementary schools of their various systems, visited and inspected during the school year ending June 30, 1923. Thirty-two of these are four-year high schools; the remaining seven are two and three-year high schools. All costs in the tables are based on the teachers' salaries alone.

TABLE I

School	Enrollment		No. of Teachers		Avg. No. Pupils Per Teacher		School Term (Months)		Average Salary Per Annum Per Teacher	
	Elementary	High School	Elementary	High School	Elementary	High School	Ele-ment'ry	High School	Elementary	High School
1	99	43	3	3	33	14	9	9	$810	$1260
2	135	18	3.5	1.5	38	12	6	8	510	1053
3	79	38	2	3	39	13	9	9	787	1320
4	78	31	2	1	39	31	6	8	525	1000
5	80	23	2	3	40	8	6	9	390	1337
6	125	8	3	1	42	8	6	8	460	1120
7	251	97	6	4	42	24	7	9	373	1125
8	126	26	3	3	42	9	8	8	600	853
9	343	108	8	5	43	22	9	9	641	1140
10	131	9	3	1	44	9	8	9	626	1080
11	180	82	4	4	45	21	9	9	798	1375
12	182	51	4	3	45	17	8	8	488	1100
13	225	84	5	4	45	21	9	9	756	1403
14	138	28	3	1	46	28	8	9	573	1080
15	167	75	3.5	3	46	25	9	9	752	1358
16	233	72	5	3	47	24	8	9	648	1185
17	141	52	3	3	47	17	8	9	693	1155
18	189	23	4	2	47	12	8	8	540	1540
19	193	45	4	3	48	15	7	9	612	1035
20	348	173	7	6.5	50	26	8	9	571	1230
21	149	75	3	4	50	19	8	9	560	1146
22	300	114	6	4	50	29	6	9	440	1448
23	198	40	4	3	50	13	8	9	540	960
24	254	53	5	4	51	13	8	9	608	1631
25	188	97	3.5	3.5	53	27	9	9	758	1187
26	381	98	7	5	54	20	9	9	598	1296
27	215	37	4	3	54	12	6	9	485	1292
28	225	47	4	4	56	12	6	9	540	1260
29	512	107	9	4	57	27	9	9	720	1134
30	287	27	5	3	57	9	8	8	600	1133
31	230	36	4	3	58	12	9	9	686	1245
32	597	148	10	6	60	25	9	9	706	1075
33	362	80	6	5.33	60	15	7	9	542	1315
34	181	39	3	3	60	13	8	9	546	960
35	331	145	5	4	66	36	9	9	657	1278
36	342	127	5	4	68	32	9	9	675	1296
37	275	38	4	3	69	13	8	8	610	920
38	141	30	2	2	70	15	6	8	640	1020
39	260	60	3	3	87	20	9	9	720	1275

In Table I the schools are arranged in order of the average number of elementary pupils per teacher. The smallest number of pupils per teacher found was 33, the largest was 87, and the median was 50. In the high schools the lowest number of pupils per teacher was 8, the highest was 36, and the median was 17. Nineteen of these schools provide the same length of school term for elementary and high-school pupils. Twenty of them provide a high-school term from one to three months longer than the elementary term. The lowest average annual salary for elementary teachers in these schools was $373, the highest was $810, and the median was $610. In contrast with these figures, the lowest average annual salary, $853, paid in a high school exceeds the highest average, $810, paid in any elementary school. The median in high school is $1,185, and the highest is $1,631.

A short term and large classes are decidedly unfavorable for the elementary child; and when, in addition, there is a poorly paid teacher, the discrimination between elementary and high-school pupils is even more marked.

TABLE II

School	Annual Cost of Instruction Per Pupil Enrolled		Ratio of High School Per Capita Cost to Elementary
	Elementary	High School	
25	$ 14.12	$ 42.88	3
15	15.76	54.33	3.4
35	9.92	35.26	3.5
9	14.95	52.77	3.5
1	24.54	87.90	3.6
32	11.83	43.58	3.7
11	17.75	67.07	3.8
13	16.80	66.80	4
28	12.65	52.99	4.2
36	9.60	44.29	4.6
12	13.41	64.71	4.8
3	19.93	104.21	5.2
26	10.98	66.12	6
8	14.85	98.46	6.6
39	8.30	63.75	7.7
37	8.87	72.63	8.2
31	11.93	103.75	8.7
18	11.42	133.91	11.7
30	10.45	125.92	12

Table II shows the annual instructional cost per pupil enrolled in elementary and high schools, and also the ratio of the elementary cost per pupil to the high-school cost per pupil. The schools considered in this table are the nineteen providing the same length of school term for elementary and high-school pupils. The lowest ratio is 3, the highest is 12, and the median is 4.6.

TABLE III

School	Annual Cost of Instruction Per Pupil Enrolled		Ratio of High School Per Capita Cost to Elementary
	Elementary	High School	
4	$ 13.46	$ 32.25	2.4
17	14.75	66.63	2.9
14	12.46	38.57	3.1
16	13.93	49.37	3.5
20	11.49	46.21	4
28	22.40	107.23	4.8
19	12.69	69.00	5
7	8.91	46.39	5.2
21	11.27	61.13	5.4
22	8.80	50.79	5.7
23	10.90	72.00	6.6
2	13.22	87.75	6.6
38	9.07	68.00	7.5
34	9.06	78.84	8.2
10	14.35	120.00	8.4
33	8.89	87.66	9.9
24	11.18	123.11	11
6	11.53	140.00	12.1
27	7.53	104.75	13.9
5	9.75	174.39	17.9

Table III gives the same facts as Table II, except that the twenty schools here considered do not offer equal school terms for high-school and elementary pupils. The lowest ratio here shown is 2.4, the highest is 17.9, and the median is 6. The lowest annual cost per elementary pupil is $7.53, the highest is $22.40, and the median is $11.37; while in the high school the average annual cost ranges from $32.25 to $174.39.

Tables II and III show the wide variance in the per capita cost of instruction and in the ratio of cost between the elementary and the high school. In some cases the high cost per pupil is due to the small number of high-school students enrolled. In many schools where the enrollment are practically the same, the per capita cost and the ratios cover a wide range. There is no good reason why these two factors should not remain nearly constant in the majority of schools. This is especially true of the ratio between the high-school and elementary per capita cost. Statistics of high schools (United States Bureau of Education) show that this ratio in the United States averages about 2.5. Whenever the ratio is much lower than this, the high school is being throttled; and when it is much higher, the elementary school is not receiving its due proportion of school funds.

The best remedy for the state of affairs observable in Tennessee is probably to withhold standardization from every high school until its

associated elementary schools maintain certain minimum requirements as to qualification of teachers, length of school terms, number of pupils in a room, and number of grades taught by each teacher. Such an attitude on the part of the communities toward their elementary schools would prevent the multiplicity of weak high schools, and at the same time prevent the school system from being top-heavy. The resulting efficiency of the elementary schools would bring a corresponding increase in high-school efficiency through an increase in the number of pupils and better preparation of the students entering high school.

EDITORIALS

THE HIGHER OUTLOOK

It is the business of the schools to empty the jails and the poorhouses. A thoroughbred education would make every citizen a self-supporting, productive worker. The modern school absorbs into itself the better influences of our society, centers attention upon these, and combines them into a plan for shaping the character of the next generation. If we could provide competently wise and efficient teachers for two or three successive generations, the whole of society would be visibly raised to higher standards.

We have at present wholly inadequate sources from which to supply a trained army of teachers. Education itself, the very temple of learning, is hampered partly by ungenerous financing and partly by incompetent teaching. If we had a system of conscription by which we could pick out the best one per cent of our citizens and honor them with the duty and responsibility of life teachers, we could not only empty the jails and the poorhouses, but multiply several times over the number of happy homes. Education is such a reconstructive force in society and its recent progress has been so amazing that its future rapid expansion and influence outstrip all our thinking. The fine potentialities of true education can be conceived only by the most daring and intrepid souls. The far-seeing prophets and wisest thinkers of our age are now sorely needed to give to education its true place and standing. And well it is that education should now come to the rescue. The political machinery of the world has largely broken down and brought the nations to the verge of despair. Is this great nation capable of shouldering the task of broad, democratic, humanizing education?

The present plans of the states in matters of education are often short-sighted and trivial, in contrast to the mammoth needs of the people and of the children. Education is the one real concernment of all those who hope for a better day—a wiser regimen in human affairs. On what other basis can we plan the reconstruction and improvement of society?

Because our minds are absorbed and filled with far less important interests—of the market place and of the senate—we have neither time nor space, in our little thoughts, to grasp the stupendous import of the wise education of the young. It is in the souls of children that

the seeds of virtue, of religion, and of knowledge are to be planted by wise and masterful teachers.

But where are these qualified teachers to come from? They do not spring, like Minerva, full-fledged from the brain of Jove. There must be discovered some method by which they can be produced on a scale commensurate with the need. The bold statement of this question reveals the yawning gap between what is and what ought to be. We are attempting to educate teachers, but how inadequate are the means! Society has scarcely started out as yet on the serious quest for its teachers.

CONCERNING OURSELVES—AND YOU

A man whom we know got into trouble the other day. He was in the midst of a group of private-school folk, and made the remark—*obiter dicta*—that there is no place in American educational economy for the private school which exists merely to provide bread and butter for the man or woman who owns it. His words were not kindly received.

His sentiments about schools are ours about educational magazines. There may or may not be a financial profit accruing to some individual—that is not the point we have in mind. But unless there is a peculiar *service* rendered—something which other agencies of the kind cannot give, or at least are not giving—a particular periodical had better not exist.

The PEABODY JOURNAL OF EDUCATION aims to serve. It believes that it can give a peculiar quality of service. This is its sole reason for existence, its only ground for inviting support from the school world.

We are not sure that we have yet quite caught our stride. A child creeps and toddles before it walks. We have not wanted to begin too positively, with our editorial policy all made up. Some of the things which we were pretty sure that we wanted to do we have started. Many more are still dreams. When they come to realization, they will widen the scope of the JOURNAL beyond what it has yet attained. We have in mind to publish articles—not one, but several—in a half dozen important fields of education which are seldom or never discussed in print. More about these anon.

Concerning subscriptions we certainly have no complaint. At least three or four have come in every day; a single envelope in yesterday's mail brought seven. Of course, the list *must* grow far beyond what it now is; but it will—of that we are confident. Your own

occasional word to a friend will help along this growth. We shall always gladly mail sample copies at your suggestion.

Criticisms, in response to our general invitation, have come in from many of you. We invite more. We are deliberately seeking guidance. You will remember, to be sure, that your own needs may not be universal; some of them may, indeed, be almost peculiar to you alone. There are other readers besides yourself to be served. Nevertheless, there is helpfulness enough to go around.

Let us close with a word about contributing articles for us to publish. We should like to make the JOURNAL, not *our* mouthpiece, but a clearing house for the exchange of the best things about teaching and supervision which just such people as *you* learn in the course of their daily routine. Much that is best in teaching never gets into print. Write briefly, but adequately, so that readers can tell exactly what you mean to say. Do not worry about style; the ideas are what counts; we can easily help you with phrasing if necessary.

Come on, friends! Let's pull—all together.

BOOK REVIEWS AND NOTICES

The Comparative Abilities of White and Negro Children. By JOSEPH PETERSON (Comparative Psychology Monograph, No. 5, George Peabody College for Teachers). Baltimore: Williams & Wilkins Co., 1923. Price, $2.25.

This is a report of an experimental study, with group tests and with an original learning test, of over 3,000 white and negro children from three Southern states. Differences of comparable race groups are stated in terms of the difference of their medians in terms of P.E. units of the white distributions and of the per cent of white children passing the median of the negro scores. A rather complete historical sketch of intelligence tests applied to race differences is given, together with results of the tests. The results of all quantitative tests of negroes by various investigators, up to the time of publication of this study, are given in comparable units in a final table.

Statistical Method. By TRUMAN L. KELLY (Stanford University). New York: The Macmillan Co., 1923. Pp. xi + 390.

In this valuable addition to treatments of statistical methods, the author has made important contributions, particularly in reliability measures and in the methods of partial and multiple correlations. The book is an attempt to meet the needs not only of biologists, economists, educators, and psychologists, but also "of those in the same fields who resort to mathematics to aid in the discovery of new truth." Neither space nor the technical nature or the content of the book permits of a statement of the several contributions of this work, which is indispensable to every serious worker in statistics.

Psychology for Students of Education. By ARTHUR I. GATES (Teachers College). New York: The Macmillan Co., 1923. Pp. xvi + 489.

This is an elementary treatment of the phases of psychology that are thought by the author suitable for the student of education. After a treatment of the receiving, the connecting, and the reacting mechanisms, the total range of the "conscious states and processes," from sensation up, are treated subjectively and in a very general fashion in a single chapter. Aside from one additional chapter on the emotions and one on intelligence tests, the rest of the book is devoted to topics found in Thorndike's volumes on educational psychology, though with additions from some of the more recent investigations. Numerous questions and exercises, usually of a "thought-provoking" type, and some selected references follow each chapter. The didactic style, unfortunately so common in education, prevails throughout the book, the idea apparently being to *give* the reader some of the facts of psychology rather than to have him develop scientific methods of approach to his problems. The book contains many valuable suggestions for teachers.

J. P.

Elements of Retailing. By RUTH LEIGH (Mrs. Sclater). New York: D. Appleton & Co., 1923. Pp. ix + 385.

A simple, nontechnical textbook in the elements and principles of modern storekeeping. Intended for the beginning student, in school or college, who does not yet have a practical business knowledge of retailing. Good reading not only for commercial students, but for all boys and girls, as a part of their much-needed general social training.

Social Science for Teachers. By C. E. MARTZ (Cleveland School of Education) and J. A. KINNEMAN (State Normal School, West Chester, Pa.). Boston: Houghton Mifflin Co., 1923. Pp. xii + 340. Price, $1.90.

A textbook for teacher-training schools or for reading circles, seeking to equip teachers with the essential materials for developing pupils to well-rounded citizenship. Valuable to the modern kind of teacher, who aims toward personal leadership in a community, as well as in a school, and molds pupils broadly beyond merely academic lines.

Economics of the Household. By BENJAMIN R. ANDREWS. New York: Macmillan Co., 1923. Pp. 609.

A satisfactory textbook for college students. Comprehensive in its study of the economics of the home. Its subject-matter is based upon sound principles. Excellent material on budgets and accounts. In the appendix, valuable suggestions for topical studies.

M. T.

The Boy's Own Book of Great Inventions. By FLOYD H. DARROW. New York: Macmillan Co., 1923. Pp. ix + 385. Price, $1.75.

Genius is but another name for imagination. Inventor and poet are the same in spirit. Poems and machines are mental creations; each existed first in the mind of a man. In this volume, mingled with the skillful description of *how it works* and *what it is for*, is an inspiring narrative of the early struggles of our greatest inventions. There is a thrill for our boys (and girls as well) in every story.

H. A. W.

The Boy's Own Book of Science. By FLOYD H. DARROW. New York: Macmillan Co., 1923. Pp. ix + 331. Price, $2.50.

Every science teacher who does not have the repellant disposition of a gorilla is frequently complimented (though he may not appreciate it!) by the visits of small boys of the neighborhood who want to buy supplies for their little laboratories; and always the plea is made: "Tell us something new to do!" This book tells what to do in the little home laboratory. Sandwiched in between the chapters are most inspiring two-page sketches of the life and works of great scientists, each of whom began with only the crude equipment of a boy's laboratory.

H. A. W.

Human Geography, by Grades. By JAMES FAIRGRIEVE and ERNEST YOUNG. New York: D. Appleton & Co., 1923.

Book I, "*Children of Many Lands,*" and Book II, "*Homes Far Away,*" furnish supplementary reading for the American child of the third grade. They tell about real people: about parents, strange in figure and dress, who have little boys and girls of their own. These all are really *human*, as the name implies. The everyday life of these "other" boys and girls is strongly contrasted with his own, and American customs lose much of their "matter of course"-ness in his mind. Splendidly illustrated with clear photographs and some color plates, these books cannot fail to arouse interest.

H. A. W.

THE SUMMER SCHOOLS OF MIDDLEBURY

The Summer Session of Middlebury College is wholly conducted in distinct schools, of which the French, Spanish, and Music Schools are conducted at Middlebury, the English School at Bread Loaf Inn in the Green Mountains, and a foreign section of the French School in Paris.

Special circulars of these schools may be obtained from

EDWARD D. COLLINS, *Director*
SIXTEENTH SUMMER SESSION
MIDDLEBURY, VERMONT

A UNIFIED COURSE IN HIGH-SCHOOL MATHEMATICS

HAWKES-LUBY-TOUTON

Algebras *Revised Editions*

Important features are the correlation of algebra with arithmetic, geometry, and physics, insistence on the practice of checking results, frequent use of graphs, and an abundance of exercises and problems.

Geometries

Places great emphasis on the cultivation of a sense of space, encourages original independent thinking, and provides a wealth of problem material.

GINN AND COMPANY
95 LUCKIE STREET, ATLANTA, GA.

THE UNIVERSITY OF MINNESOTA

Announces the Publication of

Volume II. of Its Series of Research Publications

STUDIES IN PUBLIC SCHOOL FINANCE

Prepared Under the Direction of

PROFESSOR FLETCHER HARPER SWIFT

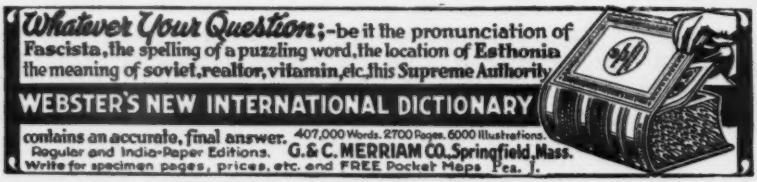
Volume II. is devoted to the East, and contains studies of public-school finance in Massachusetts, New York, and New Jersey.

Price, $2.00

ADDRESS, THE LIBRARIAN

University of Minnesota

MINNEAPOLIS


Whatever Your Question;-be it the pronunciation of
Fascista, the spelling of a puzzling word, the location of Esthonia
the meaning of soviet, realtor, vitamin, etc. this Supreme Authority
WEBSTER'S NEW INTERNATIONAL DICTIONARY
contains an accurate, final answer. 407,000 Words. 2700 Pages. 6000 Illustrations
Regular and India-Paper Editions. G. & C. MERRIAM CO. Springfield, Mass.
Write for specimen pages, prices, etc. and FREE Pocket Maps

Recent Basal Books of Unusual Merit

Essential Language Habits

CHARTERS-BETZ-COWAN

Every topic of language and grammar in the series is of use in correcting and improving speech.

More games, drills, and exercises for the fixation of correct language habits than any other series.

Use of the checking list emphasized throughout.

The series will get results, because it talks directly to the pupil in language which he can understand and upon subjects in which he is interested.

The Test and Study Speller

STARCH AND MIRICK

It brings to the pupil words which he actually needs to use.

It economizes time and effort by testing the pupil first and drilling only on those words which he cannot already spell.

It systematically reviews and tests the more difficult words.

It gives the teacher all the suggestions she needs for carrying out the lessons.

SILVER, BURDETT & COMPANY

NEW YORK NEWARK BOSTON CHICAGO SAN FRANCISCO

Building Men and Women
SCHOOLROOM EQUIPMENT
Better Service
1923-4
A New Building
Catalogs
Extending through an entire city block
Giving 100%
More Floor Space
Complete Modern Equipment
Send Your Order Now
Now is the time to order additional equipment that you have found lacking after operating your schools for a few months and before starting the latter half of the year.
Within a short time you will need:
Programs and Invitations, Diplomas,
Examination Paper and Blue Books
Prompt service is assured since the Fall rush is past.
Send your order NOW
or Secure Catalogs NOW
for Complete School Equipment
A—Agricultural Equipment
B—Biological Equipment
C—Chemicals
G—Physics and Chemistry Equipment
L—Lanterns and Slides
SE—General School Supplies
D—Diplomas
P—Programs and Invitations
Sent to Schoolmen upon request - Give Your Official Position
A Sign of Quality
QUALITY
WELCH
SERVICE
A Mark of Service
W. M. Welch Manufacturing Company
1516 Orleans Street
Manufacturers Importers and Exporters of Scientific Apparatus and School Supplies
Chicago, Ill., U.S.A.

HOW TO TEACH READING

Mary E. Pennell
Alice M. Cusack

How to Teach Reading will be found helpful to the classroom teacher in both rural and city schools, to the supervisor, and to the normal-school instructor. It presents a method, based upon psychological principles, which can be used with any reading material having content value. The suggestions for the development of both silent and oral reading habits have been tried out in all grades of the elementary school and have proven their worth.

viii + 298 pages. $1.80.

OCCUPATIONAL INFORMATION IN THE ELEMENTARY SCHOOL

Thomas Cooke McCracken
Helen Etta Lamb

Realizing that large numbers of pupils leave school at about the sixth grade, the authors of this text have endeavored to show what teachers in the lower grades can do in guiding the life interests of these children. By beginning in the kindergarten, through stories, readings, songs, and other materials which relate to occupational activities, the child comes to understand the various forms of the world's work. The value of visual education is emphasized. The book represents an important contribution to the concrete materials needed for shaping and directing the education of children in our public schools. xiv + 250 pages. *Riverside Textbooks in Education.* $1.90.

PRIMARY NUMBER PROJECTS

Rosamond Losh
Ruth Mary Weeks

A handbook of supplementary aids affording enriching material and suggestions for the early grades.

viii + 199 pages. *Riverside Educational Monographs.* $1.90.

HOUGHTON MIFFLIN COMPANY

BOSTON NEW YORK CHICAGO SAN FRANCISCO

"PROBLEMS IN RURAL EDUCATION"

By LAWRENCE A. SHARP, Ph. D.

A new textbook in a new form. 180 pages, notebook size. Bibliography and problems especially adapted for study groups of teachers and for college and normal-school classes. Released from press December 5, 1923. Price, 75 cents.

PUBLISHED BY

UNIVERSITY EXTENSION DIVISION

BOULDER, COLORADO

Question:

"Where can I get a suitable textbook for secretarial training?"

Answer:

SECRETARIAL STUDIES

Not a revision; not a course in office training in disguise; it is a new organization and presentation of material, putting secretarial training on a scientific basis, and entirely worthy of the term "secretarial." It is comprehensive in its scope, complete in its treatment, definite in its problems, and scientific in its development. The use of this epoch-making book will revolutionize secretarial training, give the course dignity, make it interesting, effective, constructive.

Price

Secretarial Studies (Text)..... $1.40
Secretarial Laboratory Materials..... .60

FOR TEACHERS' USE

Secretarial Dictation (contains all the dictation material necessary to work out the assignments in Secretarial Studies).. $0.80
Teachers' Handbook ..... .25

THE GREGG PUBLISHING CO.

New York Chicago Boston San Francisco London

GOODE'S SCHOOL ATLAS

By J. PAUL GOODE, Ph.D.
Professor of Geography, University of Chicago

"The Glory that was Greece"

The pageantry of empires swept across the geographic stage of Europe. The pageantry is gone, but the stage remains.

Only by studying this permanent stage of the world can we grasp its history or understand present-day affairs.

GOODE'S SCHOOL ATLAS is invaluable to students, teachers, and all thinking people. It contains over 300 maps, is helpfully indexed, and attractively bound in a cloth cover.

Now ready for distribution. Price, $4.00

RAND McNALLY & COMPANY

Publishers of Goode's Wall Maps

CHICAGO NEW YORK

Dept. A-125

THE AMERICAN ELEMENTARY SCHOOL

BY

JOHN LOUIS HORN

A stimulating and comprehensive discussion of elementary education and its problems. Treatment of such matters as discipline, management, health, measurements, the curriculum, attendance, classification of pupils, non-typical children, and the status of the principal and the teachers in school organization. Especially important are the chapters on the school in its relation to the community. A book essential to the teacher's most carefully selected library of pedagogy.

8vo. *422 pages* *Price, $2.00*

353 Fourth Avenue, New York — **THE CENTURY CO.** — 2126 Prairie Avenue, Chicago

LIPPINCOTT'S TEXTBOOKS

SPELLING

Lippincott's Horn-Ashbaugh Spelling Book

The scientific speller which has attracted more attention than any other book in the spelling field.

ARITHMETIC

Lennes-Jenkins Applied Arithmetic

A three-book series full of problems which are really applied to and based on life experiences. Plenty of drill and review work. Special teacher's edition, with answers.

AGRICULTURE

Davis' Productive Farming, Special Southern Edition

Well adapted to students of the eighth to eleventh grades.

Davis' New Agriculture for High Schools

PHYSIOLOGY

Eavland's Modern Physiology, Health and Hygiene

Three-book series. Just the right combination of hygiene and physiology—all from the most modern point of view.

HOME ECONOMICS

Wellman's Food Planning and Preparation

A text in food selection, preparation, and cost, presented from a scientific basis for the seventh, eighth, and ninth grades.

Taber & Wardall's Economics of the Family

The only Home Economics text presenting the subject from Problem Method of Approach.

J. B. LIPPINCOTT COMPANY

Complete Line of Elementary and High School Texts. Inquiries Solicited.

East Washington Square, Philadelphia, Pa. — 2126 Prairie Avenue, Chicago, Ill.

READY IN JANUARY

ALEXANDER-SARRATT ARITHMETICS

BY

THOMAS ALEXANDER
George Peabody College for Teachers

C. M. SARRATT
Vanderbilt University

Primary Book
Intermediate Book
Advanced Book

A basal series of Arithmetics suited to the individual abilities of children. Special emphasis on accuracy and speed in fundamental operations, and formation of correct habits. Problem material interesting and real.

DISTINCTIVE FEATURES

Diagnostic Tests

Difficulties of children diagnosed, and remedy provided in

Practice in Fundamentals Cards

Drills to train child in arithmetical functions which have been found to need development.

JOHNSON PUBLISHING COMPANY
RICHMOND, VIRGINIA

THE BEST PRINTING HOUSE IN THE BEST PRINTING CITY SOUTH

The BEST! That's *our* motto—to do everything that we do for you RIGHT. Any transaction that you may have with this concern, you can know that you will get a square deal and courteous treatment, and on this RIGHT basis we solicit your printing account.

Dissertations, Catalogues, Booklets

McQUIDDY PRINTING COMPANY
NASHVILLE, TENN.

Outfitters to Banks, Offices, Colleges

A SOURCE OF SUPPLY
FOR
School Art Materials
Miscellaneous School Supplies
Kindergarten Materials

PUBLISHERS OF
PRACTICAL DRAWING BOOKS
PRACTICAL WRITING COURSE

Write our nearest office for Catalog or for prices

WE WILL TREAT YOU RIGHT

PRACTICAL DRAWING COMPANY
(J. L. LONG, President; Class '82)
1516 S. Wabash Ave, Chicago, Illinois
Box 1143 Dallas, Texas

A FUNDAMENTAL PROBLEM OF AMERICAN DEMOCRACY

If you wish to reduce the ranks of those who legislate first and discover afterward, if at all, the economic fallacies involved, begin now by using

WILLIAMSON'S PROBLEMS IN AMERICAN DEMOCRACY

We must train for clear thinking. A largely sociological dietary, be it ever so inviting, may not prove a balanced ration. Too large portions may presage aches and pains likely later to upset the body politic at its legislative centers. The WILLIAMSON book builds foundations. In understandable language it gives the student a firm economic grounding for his study of American social problems and a clear understanding of the governmental machinery by means of which these problems must be solved.

This book, fascinating as it is thorough, is published by

D. C. HEATH AND COMPANY, 63 North Pryor St., Atlanta, Ga.

If Your School Closes in March You May

Enter George Peabody College for Teachers March 22 and complete one-third of a college year's work by June 6; or you may continue your studies through the summer, and thus complete two-thirds of a college year's work.

March 22 you may begin courses leading to the degree of Bachelor of Science, Master of Arts, or Doctor of Philosophy.

If teaching is your life work, you should continue your training in order to obtain the better positions.

Will you write now for a catalogue of courses for the spring quarter?

Spring Quarter Opens March 22, 1924

GEORGE PEOBODY COLLEGE FOR TEACHERS

NASHVILLE, TENNESSEE

TEACHERS' INVESTMENTS—

Safe bonds paying 7 per cent interest can be bought from Caldwell & Company on monthly payments as small as $10. Each payment draws 7 per cent interest from date of payment, the interest being credited to your account and helping to pay for the bond.

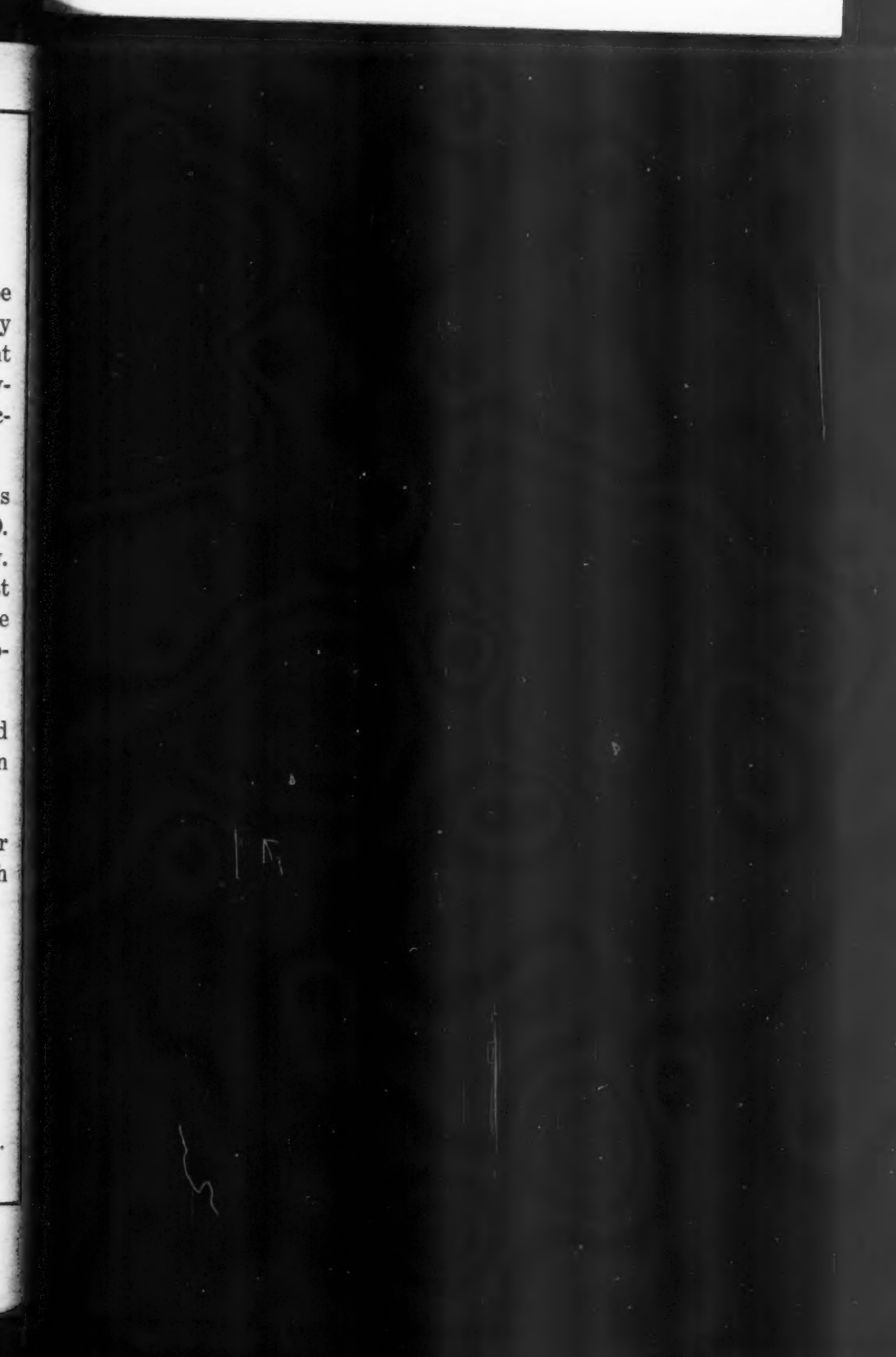
You can buy Caldwell First Mortgage Bonds in denominations of $1,000, $500, and $100. Any banker will advise you as to their safety. They represent a tangible security, being first mortgages on hotels, apartment houses, office buildings—all of them income-producing properties in growing Southern cities.

Your money invested at 7 per cent compound interest in these bonds will double itself in ten years.

Let us send you a complimentary copy of our booklet, "Getting Ahead in the World," which explains our partial payment plan.

Caldwell & Company

BANKERS

Investment Bonds

138 Union Street NASHVILLE, TENN.